

The Fortress of the Raven

*Karak in the Middle Islamic Period
(1100-1650)*



BY

MARCUS MILWRIGHT

BRILL

The Fortress of the Raven

Islamic History and Civilization

Editorial Board

Sebastian Günther
Wadad Kadi

VOLUME 72

The Fortress of the Raven

Karak in the Middle Islamic Period
(1100–1650)

By
Marcus Milwright



BRILL

LEIDEN • BOSTON
2008

On the cover: Karak castle seen from the southwest. Photograph: Marcus Milwright

This book is printed on acid-free paper.

Library of Congress Cataloging-in-Publication Data

Milwright, Marcus.

The fortress of the raven: Karak in the Middle Islamic period (1100–1650) / by Marcus Milwright.

p. cm. — (Islamic history and civilization)

Includes bibliographical references and index.

ISBN 978-90-04-16519-9 (hardback : alk. paper) 1. Karak (Jordan: Province)—History. 2. Ayyubids—History. 3. Mamelukes—History. 4. Civilization, Islamic.

I. Title. II. Series.

DS154.9.K35M55 2008

956.95'6303—dc22

2008004378

ISSN 0929-2403

ISBN 978 90 04 16519 9

Copyright 2008 by Koninklijke Brill NV, Leiden, The Netherlands.
Koninklijke Brill NV incorporates the imprints Brill, Hotei Publishing,
IDC Publishers, Martinus Nijhoff Publishers and VSP.

All rights reserved. No part of this publication may be reproduced, translated, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission from the publisher.

Brill has made all reasonable efforts to trace all right holders to any copyrighted material used in this work. In cases where these efforts have not been successful the publisher welcomes communications from copyright holders, so that the appropriate acknowledgements can be made in future editions, and to settle other permission matters.

Authorization to photocopy items for internal or personal use is granted by Koninklijke Brill NV provided that the appropriate fees are paid directly to The Copyright Clearance Center, 222 Rosewood Drive, Suite 910, Danvers, MA 01923, USA.
Fees are subject to change.

PRINTED IN THE NETHERLANDS

In memory of my father

CONTENTS

Notes	ix
Acknowledgements	xi
List of Illustrations	xiii
Chapter One Introduction	1
The Karak Plateau	4
Settlement patterns and the Archaeological Record	11
Methodology and Chapter Outline	14

PART ONE

THE HISTORICAL DEVELOPMENT OF KARAK IN THE MIDDLE ISLAMIC PERIOD

Chapter Two The Political History of Karak	25
Early Developments and the Creation of Crusader Oultrejourdain	25
CrusaderK arak	29
AyyubidK arak	37
Bahṛī Mamluk period	42
Burjī Mamluk period	45
Ottoman Rule and the Rise of Tribal Power	48
Chapter Three Administration and Architectural Patronage in Karak and its Dependent Regions	53
Crusader Period	54
AyyubidPeriod	69
Mamluk Period	78
Ottoman Period	93
Chapter Four Economic Survey of Karak and its Dependent Regions	100
Bedouin and Livestock Rearing	103
Balqā'	105

Karak Plateau	109
Sharāt, Jibāl and South	113
Khalil/Hebron	117
Jordan Valley and the Dead Sea Ghawr	120
Chapter Five Summary of the Historical Evidence	126

PART TWO

THE MIDDLE ISLAMIC CERAMICS FROM KARAK

Chapter Six Unglazed Ceramics	137
Introduction	137
Section 1: Handmade Pottery	145
Section 2: Unglazed Wheelthrown Wares	154
Section 3: Relief-moulded Unglazed and Stamped Unglazed Wares	170
Chapter Seven Glazed Ceramics	184
Introduction	184
Section 1: Lead-glazed Wares	185
Section 2: Alkaline-glazed Wares	207
Section 3: Chinese Imports	238
Chapter Eight Summary of the Ceramic Evidence	244
Chapter Nine Conclusion	256
Appendix One: Catalogue of the Ceramics from Karak (Areas: A–F)	273
Appendix Two: Identification of Sites	384
Bibliography	403
Index	433

Plates 1–41

NOTES

Dates and centuries are given according to the Common Era. *Hijrī* dates are only provided in the case of monumental inscriptions and other dated artefacts. Archaeologists working in the Middle East have been unable to reach a consensus concerning the labels to be given to the broad phases within the Islamic period. Where possible the century or centuries are specified, but when this is not feasible the term ‘Early Islamic’ can be taken to refer to the period from the end of Byzantine rule in the early seventh century through to *c.* 1100 C.E. and ‘Middle Islamic’ to the period from *c.* 1100 until *c.* 1650. The term ‘Late Islamic’ is avoided in this study and for the period after *c.* 1650 the relevant century or centuries are given instead. The geographical term Bilād al-Shām (i.e. Greater Syria) refers to an area now covered by Syria, Jordan, Lebanon, Israel, the Palestine Authority, and the southeast of Turkey.

The system of transliteration for Arabic is that employed in the *International Journal of Middle East Studies*. Arabic words that have a modern English equivalent are unitalicised and written without diacritics. Most place names in Bilād al-Shām are given according to their modern Arabic spelling, with exceptions made in the cases of some of the cities and towns well known by Westernised names (Mecca, Medina, Jerusalem, Damascus, Aleppo, Gaza, and so on). Some archaeological sites are referred to by their ancient names (alternative names and spellings of archaeological sites are listed in appendix 2). Ottoman technical terms employed in the region of Bilād al-Shām between 1516–1918 have been given according to their Arabic form. I have not attempted to standardise the spellings of technical terms, personal names and place names in Persian, Turkish, Mongol and Chinese.

Pottery Numbering System and Maps

Shards from the Karak assemblage (areas A–F) are cited according to the following system: the number is prefixed by a letter (A–F) that refers to the area where the shard was found. This letter is followed by the catalogue number (1–8201) and a second number (given in square brackets) provides the location of the illustration of the artefact

in the catalogue (appendix 1). Distribution maps for selected wares (figs. 9–21) cover only sites in Jordan, Syria, Lebanon, Israel and the Palestine Authority. Reported finds from outside this area are given in the footnotes of chapters 6–8. The locations given for pottery found on regional surveys are only approximate.

ACKNOWLEDGEMENTS

This book grew out of a doctoral thesis submitted at the Oriental Institute, University of Oxford in 1999. I want first of all to record my gratitude to my supervisor, Jeremy Johns, a demanding, but always good humoured guide through the intricacies of Middle Eastern archaeology and Islamic history.

The initial stages of research were funded by a scholarship from the British Academy. The fieldwork seasons in Jordan, Syria and USA were also supported by grants from the Barakat Trust, the Arnold, Bryce and Read Modern History Fund, and the Social Science and Humanities Research Council of Canada. The Department of Antiquities of Jordan provided permission for my fieldwork in Karak and Amman. Of the many people who helped my work in Jordan, I particularly thank Jerry Mattingly, Khalid Tarawneh, William and Fidelity Lancaster, Alison McQuitty, Jihad Haroun, the Kana'an family, Paul Laylor, and Floresca Karansou. I also remember with great warmth the people of Karak for their hospitality during my visits to the town. My thanks to Maxwell Miller and the staff of the Michael C. Carlos Museum of Emory University for their help during my time in Atlanta GA.

Robin Brown read an earlier draft, and the book has been much improved by her suggestions. On numerous occasions Ruba Kana'an took the time to elucidate difficult passages in Arabic chronicles or to correct my translations. I am also grateful to Julian Raby and Denys Pringle for their valuable criticisms. Many others have aided the research and writing of this book, and the following list is far from complete: Donald Richards, James Allan, Chase Robinson, Robert Hillenbrand, Zeina Klink, Nitzan Amitai-Preiss, Mahmoud Hawari, Christine Schams, Robert Mason, Véronique François, Shelagh Vainker, Chris Mundigler, Rebecca Michaels, and my editor, Trudy Kamperveen. All remaining errors and omissions are, of course, the responsibility of the author.

The greatest debt of thanks is owed to my family. My parents, Digby and Mary Milwright have been unwavering in their support of what must sometimes have seemed an endless project. I cannot begin to count the ways in which my wife, Evanthia Baboula has contributed

to the writing of this book with her love, patience, and wise advice. Lastly, I thank my son, Loukas for teaching me the value of effective time management.

LIST OF ILLUSTRATIONS

All photographs are by the author unless otherwise stated. The maps (figs. 1–21) were prepared by Chris Mundigler.

Figures

Figure 1. Map of the Middle East showing sites discussed in the text	5
Figure 2. Map of Jordan showing sites discussed in the text	6
Figure 3. Map of Jordan during the Crusader period	55
Figure 4. Map of Jordan during the Ayyubid period	70
Figure 5. Map of Jordan during the Mamluk period	79
Figure 6. Map of Jordan during the early Ottoman period	94
Figure 7. Map of Bilād al-Shām showing excavations reporting Middle Islamic pottery	141
Figure 8. Detail of map on figure 7	142
Figure 9. Map of Bilād al-Shām showing regional surveys reporting Middle Islamic pottery (dots mark approximate location of the survey)	143
Figure 10. Distribution in Bilād al-Shām of handmade pottery with simple slip-painting	153
Figure 11. Distribution in Bilād al-Shām of sugar pots and syrup jars	162
Figure 12. Distribution in Bilād al-Shām of relief-moulded unglazed canteens and jugs	172
Figure 13. Distribution in Bilād al-Shām of relief-moulded unglazed slipper lamps	176
Figure 14. Distribution in Bilād al-Shām of type 4 and type 5 sphero-conical vessels	178
Figure 15. Distribution in Bilād al-Shām of lead-glazed lamps	193
Figure 16. Distribution in Bilād al-Shām of widely-incised sgraffito	199
Figure 17. Distribution in Bilād al-Shām of relief-moulded lead-glazed ware	205

Figure 18. Distribution in Bilād al-Shām of black under turquoise stonepaste	218
Figure 19. Distribution in Bilād al-Shām of turquoise and black stonepaste	225
Figure 20. Distribution in Bilād al-Shām of blue and black stonepaste and blue and white stonepaste	231
Figure 21. Distribution in Bilād al-Shām of Italian and Chinese glazed wares (late thirteenth to early sixteenth century)	241

Pottery Catalogue

Catalogue Page 1. Handmade wares without slip-painting	348
Catalogue Page 2. Handmade wares without slip-painting and hand-made slip-painted wares	349
Catalogue Page 3. Handmade wares with slip-painting	350
Catalogue Page 4. Handmade wares with slip-painting	351
Catalogue Page 5. Unglazed wheelthrown wares: basins	352
Catalogue Page 6. Unglazed wheelthrown wares: basins	353
Catalogue Page 7. Unglazed wheelthrown wares: basins and storage jars	354
Catalogue Page 8. Unglazed wheelthrown wares: storage jars ...	355
Catalogue Page 9. Unglazed wheelthrown wares: storage jars ...	356
Catalogue Page 10. Unglazed wheelthrown wares: basins and sugar pots	357
Catalogue Page 11. Unglazed wheelthrown wares: sugar pots	358
Catalogue Page 12. Unglazed wheelthrown wares: syrup jars and drainpipes	359
Catalogue Page 13. Unglazed wheelthrown wares: drainpipes, jugs, jars, and lids	360
Catalogue Page 14. Unglazed wheelthrown wares: jugs, jars, and bowls	361
Catalogue Page 15. Unglazed wheelthrown wares: bowls, closed vessels, and pipes	362
Catalogue Page 16. Unglazed wheelthrown wares, unglazed relief-moulded and stamped wares	363
Catalogue Page 17. Plain lead-glazed wares: bowls	364
Catalogue Page 18. Plain lead-glazed wares: bowls and pans ...	365
Catalogue Page 19. Plain lead-glazed wares: bowls and closed vessels	366

Catalogue Page 20. Plain lead-glazed wares: bowls and closed vessels	367
Catalogue Page 21. Plain lead-glazed lamps, slip-painted lead-glazed ware, and sgraffito ware	368
Catalogue Page 22. Sgraffito ware	369
Catalogue Page 23. Sgraffito and relief-moulded lead-glazed ware	370
Catalogue Page 24. Relief-moulded lead-glazed ware	371
Catalogue Page 25. Relief-moulded lead-glazed and plain alkaline-glazed ware (earthenware and stonepaste)	372
Catalogue Page 26. Plain alkaline-glazed ware, black under colourless glaze ware, and black under turquoise glaze ware	373
Catalogue Page 27. Black under turquoise glaze ware and polychrome underglaze-painted ware	374
Catalogue Page 28. Polychrome underglaze-painted ware and turquoise and black ware	375
Catalogue Page 29. Turquoise and black ware	376
Catalogue Page 30. Turquoise and black ware and blue and black ware	377
Catalogue Page 31. Blue and black ware	378
Catalogue Page 32. Blue and black ware	379
Catalogue Page 33. Blue and black ware	380
Catalogue Page 34. Blue and black ware and blue and white ware	381
Catalogue Page 35. Blue and white ware	382
Catalogue Page 36. Blue and white ware, lustre-painted ware, celadon, Chingpai ware, Shufu ware, blue and white porcelain	383

Plates

(Plates 1–41 can be found at the back of the book.)

Plate 1. Lead seal of Reynald of Châtillon (1177–87), Cabinet des Médailles, Paris. After Deschamps (1939).

Plate 2. Representation of Karak from the Mādabā mosaic map, sixth century.

Plate 3. Representation of Karak from the mosaic floor of the church of St Stephen, Umm al-Raṣāṣ (dated 718).

Plate 4. Plan of Karak town and castle.

- Plate 5. Plan of Karak castle. After Deschamps (1939).
- Plate 6. Plan of the 'reception hall' complex, Karak castle. Reproduced by permission of Robin Brown.
- Plate 7. Karak castle seen from Marj al-Thāniyya (looking west).
- Plate 8. Karak castle seen from the southwest.
- Plate 9. Karak castle seen from Umm al-Thalj from the south.
- Plate 10. North front and northeast salient, Karak castle, from the west.
- Plate 11. Glacis and east front of Karak castle, from the north.
- Plate 12. Lower bailey of Karak castle, from the north.
- Plate 13. Frankish chapel, upper bailey, Karak castle.
- Plate 14. Mamluk keep, Karak castle, from the south.
- Plate 15. Entrance on west side, Karak castle.
- Plate 16. Carved limestone panel with interlace pattern. East side of Karak castle. Probably fourteenth century.
- Plate 17. Burj al-Zāhir, Karak, from the northwest.
- Plate 18. Burj al-Banawī, Karak, from the south.
- Plate 19. Detail of the inscription on Burj al-Banawī.
- Plate 20. Burj al-Ṣa'ūb, Karak.
- Plate 21. Shawbak castle seen from the south.
- Plate 22. Frankish parish church, Shawbak.
- Plate 23. Mamluk period tower near entrance, Shawbak.
- Plate 24. Four-*iwān* reception hall, Shawbak. Reproduced by permission of Robin Brown.
- Plate 25. Muslim shrine near Shawbak.
- Plate 26. General view of Wu'ayra, Wādī Mūsa.
- Plate 27. Entrance to Wu'ayra.
- Plate 28. View of Ḥabīs.
- Plate 29. Arrow slits in the curtain wall of Ḥabīs.
- Plate 30. Tower at Ṭafila seen from the south.
- Plate 31. Watchtower at the 'Ammān citadel.
- Plate 32. Masonry at the summit of Jabal al-Qal'a, Salt.
- Plate 33. Monument to the battle of Mu'ta. Mamluk period.
- Plate 34. Fort at Ayla/'Aqaba.
- Plate 35. *Ḥajj* fort at Qaṭrāna.
- Plate 36. *Ḥajj* fort at 'Unayza.
- Plate 37. Qal'at al-Ḥasā.
- Plate 38. Bridge at Ḥasā.
- Plate 39. Carved and painted stucco fragments found in area A. Probably late thirteenth or fourteenth century.

Plate 40. Enamelled glass found in area A. Late thirteenth or fourteenth century.

Plate 41. Marvered glass found in area A. Thirteenth or fourteenth century.

CHAPTER ONE

INTRODUCTION

From the mid twelfth century to the present day Karak has played an important role in the political and economic life of Jordan. The massive fortress located at the southern end of the old town must have been a familiar, if forbidding, sight for merchants and travellers using the southern section of the King's Highway (*darb al-malik*) during the Crusader, Ayyubid, Mamluk and Ottoman periods. For those performing the *hajj* from Damascus the stop at the village of Thāniyya, located just east of Karak, was a valuable chance to buy provisions from local traders and villagers before taking the road south and then east towards Ma'ān, and thence into the Arabian desert. One such pilgrim on the arduous trek south to the Holy Cities of Mecca and Medina was the famous Maghribī adventurer Muḥammad b. 'Abd Allāh ibn Baṭṭūṭa (d. 1377). Karak evidently made a lasting impression on Ibn Baṭṭūṭa for he provides the following description in his travelogue:

Then the travellers came to the castle of Karak which is one of the most marvellous, most inaccessible and most celebrated of castles. It is called the 'Fortress of the Raven' (*ḥiṣn al-ghurāb*). It seems to be surrounded on all sides by valleys, and has one gate, the entrance of which is hewn in the solid rock, as also is the entrance to its vestibule (*dihlīz*). This fortress is used by kings as a place of refuge in times of calamity.¹

Similar accounts are to be found in the works of other Arab and European authors of the medieval period.² The sources dwell upon the ideal location of the settlement and the defensive strength of the fortifications. This reputation for impregnability was well founded, for no army before the Ottoman period succeeded in storming the fortress

¹ Ibn Baṭṭūṭa (1853–58), I, pp. 254–55. Adapted from trans. in Ibn Baṭṭūṭa (1958–2000), I, p. 72. It is not clear where the epithet, *ḥiṣn al-ghurāb*, comes from, but it is used earlier by Ibn al-Wāṣil when discussing an event during the rule of al-Mughīth 'Umar. See Ghawanma (1982), p. 303. A fortress of the same name exists on the coast of Yemen, while another possible link might be drawn with the heraldic bird that occupies one side of the lead seal of Reynald of Châtillon, last Crusader lord of Oultrejourdain (pl. 1).

² For instance, Dimashqī (1866), p. 213; Khalīl al-Zāhirī (1894), p. 43; Poloner in Tobler (1974), p. 256.

by force of arms. Although large sections of the walls were dismantled by Egyptian forces in 1834 following a siege,³ and earthquakes later in the same century destroyed more of the castle and the old town, Karak still presents an impressive aspect to the modern viewer. From the hill of Marj al-Thāniyya it is still possible to gain a good view of the castle and the town of Karak (pl. 7). Separated from the surrounding plateau by deep valleys the castle and walled town of Karak is one of the largest and most spectacular fortifications in Bilād al-Shām. The castle combines elements of Crusader, Ayyubid and Mamluk building programmes. The town too was originally surrounded by a defensive wall dotted with towers.

Such extensive construction work over the course of nearly three centuries—between the mid twelfth and the early fifteenth century—reflects the great importance attached to Karak first by the Crusader kings of Jerusalem and later by the Muslim sultans of Damascus and Cairo. Ownership of Karak provided the key to the control of considerable territories in southern Jordan as well as the traffic passing through them. In the period from *c.* 1142 until the end of the sixteenth century the castle of Karak performed a wide variety of administrative and military functions including barracks, arsenal, prison, treasury, *diwān*, seat of a regional governorate and, for a brief interlude in the mid fourteenth century, capital of an entire empire. At their greatest extent, the territories directly controlled by Karak stretched from the Wādī Zarqā' in the north to the Red Sea port of 'Aqaba in the south. This area of central and southern Jordan comprises the regions of Balqā', Arḍ al-Karak (the Karak plateau), Sharāt al-Jibāl, and the Ḥisma (i.e. the arid lands between the Sharā' escarpment and the Red Sea), as well as the eastern sides of the Wādī 'Araba, Dead Sea Ghawr, and the southern Jordan valley. Khalīl (Hebron) in Palestine sometimes also formed a part of the area administered by Karak. During the Middle Islamic period (here defined as *c.* 1100–1650 C.E.) Karak enjoyed a prominent in the political life of the Levant far removed from the relative obscurity of every other town east of the Jordan Valley and Dead Sea Ghawr and south of the Wādī Zarqā'.⁴

³ The 1834 siege and its aftermath are discussed in chapter 2.

⁴ Very few references to Karak appear in Arab histories dealing with the pre-Crusader period. The thirteenth-century historian, Ibn Shaddād ([1963], p. 69) remarks that he could find no mention of the town 'in the books of history that I have studied from the early days of Islam.'

This book traces the development of Karak as a political and economic centre in the south of Bilād al-Shām in the Middle Islamic period. Three bodies of evidence are employed in this study. The first is the record of events relating to Karak and its dependent regions in primary sources written in Arabic and a range of European languages. These sources cover a wide chronological range from the seventh to the early twentieth century, though the focus is upon the Crusader, Ayyubid, Mamluk and early Ottoman periods. The second body of evidence comprises information drawn from the surviving monumental inscriptions and, more generally, from the extant monumental architecture of central and southern Jordan. The collection of this historical and architectural data pertaining to Karak has been directed toward six areas: the evolution of the site as an administrative centre from the foundation of the Crusader castle (after 1142) until the breakdown of Ottoman central control in southern Jordan in *c.* 1650 (some comments are also made about the remainder of the Ottoman period); the size of the territories governed by Karak in the Middle Islamic period; the administrative structures established for the control of those regions; the levels of state investment in the Karak region (including architectural patronage); the economic resources of the region; and the extent to which Karak was involved in trade with other areas in the Levant and the eastern Mediterranean.

The third body of evidence—which comprises the second part of the book—is the pottery recovered from excavations and survey work in Karak and the surrounding region. Other artefacts including glass, painted stucco, and coins of the Middle Islamic period have been located within Karak (pls. 39–41),⁵ but the pottery assemblage was chosen for the present study because it represents the most consistent record of occupation on the site. The ceramics presented in this study comprise just over 8,200 shards collected in six locations (classified here as areas A–F).⁶ The two deposits (A and F) found within the Mamluk donjon at the south end of the installation are unstratified dumps which were the result of clearance work within the castle by the Department of

⁵ Glass and plaster fragments were located in Karak castle (area A) and are now stored in the Karak Archaeological Museum by the Department of Antiquities of Jordan. A hoard of 2,224 *dīhrams* dating between 657/1257 and 696/1296 were also found in Burj al-Zāhir in 1963. See Sari (1986a and 1986b).

⁶ No attempt has been made to estimate the number of complete vessels represented in these six areas.

Antiquities of Jordan in the 1970s. Areas B–E are made up of pottery shards from field surveys around the walls of the castle, gathered as part of the Miller survey of the Karak plateau.⁷

The book argues that it is only through the integration of the historical and archaeological records that it is possible to assemble a meaningful picture of the political and economic history of Karak through the Middle Islamic period. The book establishes correlations between the historical and the archaeological records but also points out the areas where the two provide divergent results. The potential significance of these correlations and divergences for the interpretation of the history of Karak is discussed in the conclusion (chapter 9). The methodology employed in this study is discussed in more detail later in the introduction. In order to put this methodological discussion into context, some comments must first be made concerning the general characteristics of Karak and its immediate surroundings, as well as the role of archaeological research in the assessment of the density of settlement in the region during the Middle Islamic period.

The Karak Plateau

The historical significance of the Karak plateau, during the Middle Islamic period and before, can be attributed to two principal factors: agricultural productivity of the region and its geographical position in relation to the urban centres of Bilād al-Sham and Arabia. Since much of the analysis of the Crusader and Muslim written sources and the ceramics relies upon an understanding of these two factors, it is necessary first to outline briefly some of the geological, ecological and demographic characteristics of the Karak plateau itself. Karak is now the administrative centre of *Liwā' al-Karak*. The town is located *c.* 170 km south of the modern capital of Jordan, 'Ammān (figs. 1 & 2). Karak is situated at the centre of a fertile plateau (Arḍ al-Karak) formed from an escarpment of limestone rising from 610m to 1,300 m above

⁷ Karak citadel is identified in JADIS (Jordan Antiquities Database and Information Systems) as site 210601. The precise circumstances of the deposits A and F and the survey areas B–E are discussed in more detail in the introduction to chapter 6. The ceramics from the Miller survey are now stored in the Michael C. Carlos Museum, Emory University, Atlanta GA. The results of the Miller survey are published in Miller (1991). For the Islamic pottery, see also Brown (1992).

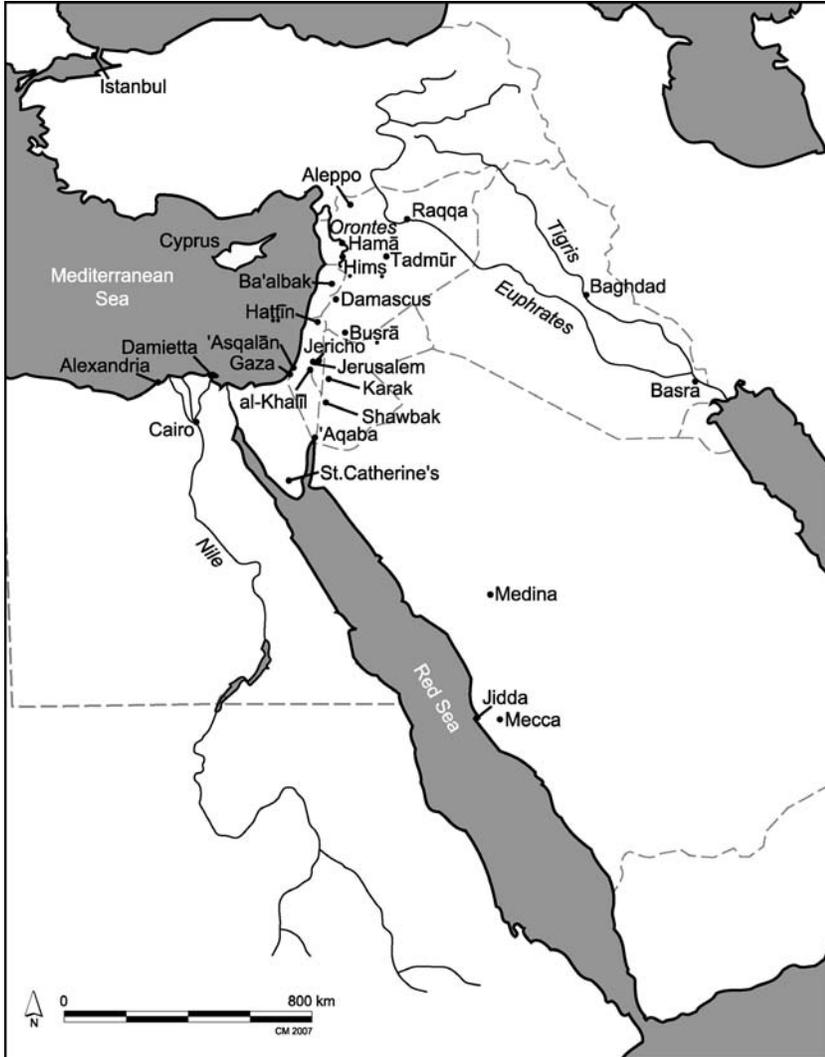


Figure 1. Map of the Middle East showing sites discussed in the text.

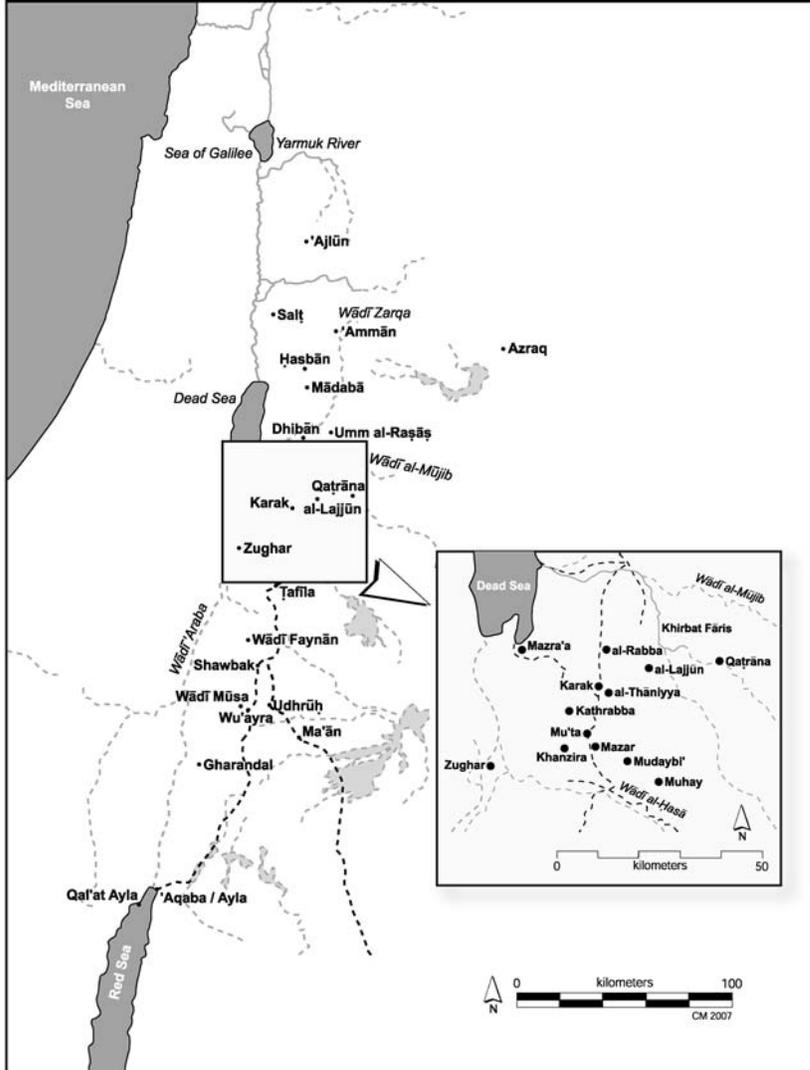


Figure 2. Map of Jordan showing sites discussed in the text.

sea level.⁸ The shallow but fertile soils of the plateau were formed through the weathering of the limestone (and other rocks including sandstone, shale and basalt) combined with the deposition of wind-blown soil (loess).⁹ The productive agricultural lands of the central zone of the plateau are currently utilised for the cultivation of cereals, olives and a variety of vegetables and fruits.¹⁰ The rift valley to the west and south of Karak is covered with less fertile soils suitable only for limited cereal production using dry farming techniques.

The weather patterns on the plateau divide into two seasons: a mild, wet winter and a hot, dry summer. The high elevation of the land causes regular frosts and occasional snow in January and February while moderating the extremes of temperature in the summer months. Precipitation is concentrated between late October and early May. The annual rainfall on the central part of the plateau is subject to considerable fluctuation, but averages 300–350 mm.¹¹ While the rainfall average is sufficient to maintain a consistent level of agricultural productivity (in the twentieth century the only years in which crops were not harvested due to low rainfall were 1915, 1946 and 1948),¹² problems are encountered with the absence of rain during the summer months and the vast amount of water lost to the soil due to runoff from the wadis. Cisterns cut into the limestone are commonly used in other parts of the plateau for water conservation.¹³ The geological formation of the plateau (limestone on a bed of non-porous sandstone) results in the appearance of springs, particularly on the western slopes of the plateau, but also in some of the higher areas.¹⁴

There is an even distribution of small settlements within the areas that combine fertile soil and sufficient rainfall (more than 300 mm per

⁸ Gubser (1973), pp. 8–12.

⁹ For a more detailed discussion, see John Foss' environmental study of the Karak plateau at www.vkrp.org/studies/environmental/plateau-soils

¹⁰ Cuinet (1896), pp. 500–502; Mattingly (1983), p. 605. The crops cultivated on the Karak plateau and other regions of Jordan in the Middle Islamic period are discussed in chapter 3.

¹¹ The average rainfall in the period 1937/38–1973/74 was 306.7 mm per annum, ranging from 101.9 mm to 661 mm. See Harlan (1981), p. 155.

¹² Lancaster and Lancaster (1995), p. 105.

¹³ Pace (1996).

¹⁴ Mattingly (1983), pp. 603–604; Abel (1967), 1, pp. 156–57. Around Karak there are three springs: 'Ayn Sara, 'Ayn al-Franj and 'Ayn al-Ḥābis. An author of the Mamluk period (Shujā'ī [1977], p. 218) mentions a spring called 'Ayn Bayḍa near Karak, although whether this should be identified with any of the previous three is unclear.

annum). Larger settlements tend to be clustered on the north-south axis running through the plateau near the route of the King's Highway. A combination of less fertile soil and reduced average rainfall makes the east of the plateau from Lajjūn to the desert less suited to sedentary occupation. The nomadic population using this transitional space between the fertile plain and the desert also ranges over the central belt of the plateau in search of land for grazing and the seasonal planting of crops. While the competition for limited resources has resulted in occasional breakdowns of stability, it would be unwise to create a simplified image of continual hostility between settled and nomadic populations. The distinction between village dweller and pastoral nomad is often blurred with villagers roaming over extensive territory in search of grazing in the summer months and pastoral nomads cultivating small patches of land in spring.¹⁵ The travellers, John Lewis Burckhardt (d. 1817) and Charles Doughty (d. 1923), who both visited southern Jordan in the nineteenth century, note that the occupants of Karak would take to tents and travel considerable distances in order to tend fields in the growing seasons.¹⁶ This evidence suggests that the population of the plateau has existed for many centuries within a continuum of settlement strategies ranging between sedentary and fully nomadic existences.

Although the destruction caused by bedouin raids on settled communities is a consistent preoccupation among the writers of the Mamluk and Ottoman periods, it is possible that the levels of violence and damage have been exaggerated. For instance, modern anthropological studies of tribal relations on the plateau indicate that serious outbreaks of violence in the settling of disputes are relatively rare.¹⁷ Conversely, both sedentary and nomadic groups have much to gain from one another in the exchange of commodities and services. Trade between urban merchants and bedouin is recorded in documents of the Ottoman period.¹⁸ Traditionally, the main financial contribution of the bedouin was in the raising of livestock, although other goods such as dairy products, indigo, flat-weave rugs, and plant ashes (*qalī*) for the manufacture of soap are recorded in written sources of the eighteenth

¹⁵ Lancaster and Lancaster (1995), pp. 114–15.

¹⁶ Burckhardt (1822), p. 387, and see pp. 346, 350–51, 385; Doughty (1926), I, p. 21.

¹⁷ Lancaster and Lancaster (1995), p. 109.

¹⁸ Cohen (1989), p. 121 (citing Jerusalem court records). See also comments in Rogan (1999), pp. 113–14.

and nineteenth centuries.¹⁹ The issue of the economic contribution of the bedouin during the Middle Islamic period is addressed more fully in chapter 4.

The Karak plateau, and most of the remainder of the fertile western side of Jordan can thus be characterised as a rural economy producing considerable quantities of cereal crops supplemented by olives, fruit and vegetables, and meat and dairy products, as well as some manufactured goods such as textiles and rugs. Burckhardt noted rudimentary craft activities in the Karak in the early nineteenth century,²⁰ but there is scant evidence that this town, or any of the others in central and southern Jordan, supported economically important industries at any point during the Middle Islamic period.²¹ What access the inhabitants of the areas south of the Wādī al-Mūjib enjoyed to the specialised manufactured commodities of the urban centres in Palestine and Syria was ensured through the sale of the agricultural surplus of the Karak region. This exchange of agricultural products for manufactured items was dependent, however, upon the ability to move goods in and out of the region. The problem is well illustrated in an account of the lands around Karak given by Charles Doughty writing in the 1880s:

... here are very fertile corn lands, ploughed to a hand-depth by Kerakers: a few pounds will produce a great field, and grain in their town is almost as sand, that it cannot be sent abroad, for the excessive cost of camel carriage, which is as much as half the load to Jerusalem.²²

At the time of Doughty's visit the poor quality of the transport infrastructure and the lack of security in the rural areas east of the Jordan Valley and Dead Sea Ghawr meant that the economic potential of the agricultural lands of the Karak plateau remained largely untapped.²³ A recurrent theme in the historical sources throughout the Middle Islamic period is the expenditure of money and man-power needed by central government in order to maintain the lines of trade and communication between southern Jordan and the remainder of Bilād

¹⁹ Burckhardt (1822), pp. 354–55, 392–93, 403, 405, 411; Irby and Mangles (1823), p. 382; Volney (1959), pp. 347–48.

²⁰ Burckhardt (1822), p. 388.

²¹ With the possible exception of carpets produced in Shawbak. See Little (1986), pp. 85–89. This issue is discussed in chapter 4.

²² Doughty (1926), I, p. 22.

²³ This situation was to change in the last decade of the nineteenth century as the Ottoman authorities sought to extend their influence into southern Jordan. See Rogan (1999).

al-Shām. Without the investment of money and resources the traffic of agricultural products out of the region could be severely reduced or even completely curtailed. The main routes running through the Karak plateau are, in this respect, of considerable importance to the understanding of the written sources and the archaeological evidence of the Middle Islamic period.

Although the bulk of the modern commercial traffic now makes use of the Desert Highway to the east, historically, the most important route running north-south through Jordan before the twentieth century was the King's Highway (*darb al-malik*,²⁴ and also known as *darb al-sultān* or *ṭarīq al-rasīf*). This road, following the course of the Roman Via Nova Traiana, ran south from Damascus, through the Balqā', across the Wādī al-Mūjib and then through the Karak plateau via Arīḥā, Rabba and Karak.²⁵ At Karak the road divided with one fork descending southwest through the Ghawr and on to the Palestinian city of Gaza and the other fork continuing south. The southern road crossed the Wādī al-Ḥasā and continued past the southern Jordanian towns of Ṭafīla and Shawbak on the way to the port of Ayla/'Aqaba on the Red Sea (those performing the *ḥajj* often passed from the Karak plateau southeast toward the town of Ma'ān before heading south into the Arabian desert). From Ayla/'Aqaba travellers could turn west through the Sinai to Egypt (*ṭarīq Ṣadr wa Ayla*),²⁶ or southeast to the Ḥijāz.

The King's Highway was of considerable importance for trade and communication between Syria, Arabia and Egypt. First, it functioned as one of the routes between the Syrian capital and the urban centres of Egypt (this route enjoyed its most prominent role when the Crusaders occupied the coastal regions and thus barred the way through Palestine and the northern Sinai). Second, the pilgrims and commercial traffic between Syria and the Holy Cities of Mecca and Medina commonly made use of substantial sections of the King's Highway. From the early sixteenth century the majority of the *ḥajj* pilgrims started to make use of a route further east on the edge of the desert,²⁷ but the King's Highway remained an important commercial route. The road connecting the

²⁴ This name appears to be a translation of the Hebrew *derek hemmelek*. See Mattingly (1996), p. 93.

²⁵ Proper (1995), p. 47; Majali and Mas'ad (1987); Mattingly (1996), pp. 89–96.

²⁶ For this route, see Mouton *et al.* (1996).

²⁷ For a discussion of the forts built along this new route, see Petersen (1995).

Karak plateau to southern Palestine via the south end of the Dead Sea Ghawr is less significant in the context of the wider history of Middle Islamic Bilād al-Shām but, as is shown in the analysis of the economic history and the archaeological record, it was of considerable importance for commercial activity in Karak and the other settlements of southern Jordan.

Settlement Patterns and the Archaeological Record

In order to assess the role of Karak as the economic centre of the lands south of the Wādī Zarqā', it is necessary to come to an understanding of the fluctuations in population during the Middle Islamic period. The study of pre-twentieth-century settlement patterns on the Karak plateau and the other regions of southern Jordan has been hampered by the lack of solid evidence. The information provided by the historical record is patchy, and the brief accounts of these regions seldom concern themselves with events away from the principal settlements of Karak and Shawbak. Even the few cases where an author gives an estimate of the number of villages in a given region, there are good reasons to treat such accounts with a degree of caution.²⁸ The handful of extant cadastral records for Jordan all date from the sixteenth century and, while their historical significance should not be minimised, the interpretation of the information contained in them is not without problems (see chapter 4).²⁹ The extent to which these documents can be taken as an accurate record of population levels and agricultural productivity even at the time they were written is open to question. In this context, archaeological research has a valuable role to play in the study of settlement patterns. The interpretation of data from archaeological research has also proved to be problematic. In particular, there are significant difficulties relating to two main issues: first, the absence of satisfactory dating parameters for many pottery wares of the Islamic period; and second, establishing what the widespread reintroduction of handmade pottery into the rural communities during the eleventh

²⁸ This issue is discussed in greater detail in chapters 4 and 5.

²⁹ Two of the sixteenth-century *daftar*s have been published. See Hütteroth and Abdulfattah (1977); Bakhit and Hmoud (1989 and 1991). These documents are discussed in greater detail in chapters 3 and 4.

and twelfth centuries might have to tell us about social and economic environment of Middle Islamic Jordan.

The Karak plateau has been the subject of considerable archaeological work in the last three decades and thus provides a good case study for an examination of settlement in Middle Islamic Jordan. Field surveys and excavations have sought to establish the long-term patterns of settlement on the Karak plateau in the Byzantine and Islamic periods.³⁰ The surveys have tended to indicate pronounced fluctuations in levels of sedentary occupation moving from a high point under Byzantine rule (particularly during the fifth and sixth centuries), descending under the Umayyads, and reaching a low point during the periods of Abbasid and Fatimid control.³¹ According to the conventional interpretation of the survey evidence, the fortunes of the region saw a revival from the twelfth to the fourteenth century, but with the level of sedentary occupation not reaching the heights experienced during the last two centuries of Byzantine rule. The decline of the later Mamluk period (fifteenth and early sixteenth century) continued into Ottoman rule reaching, at some time in the late seventeenth century, the state of depopulation later described by European travellers to the region in the late nineteenth century.³²

An important revision to this general thesis of peaks and troughs in the population from one dynastic era to the next has been proposed by Jeremy Johns. He points to the literary sources which suggest instead a general continuity of sedentary occupation through the Islamic period.³³ He also discusses some of the methodological difficulties encountered during field surveys, particularly in relation to the use of pot shards as the principal tool for identifying the occupation phases on a given site.³⁴ Pottery identification remains one of the most important aspects of survey work in Bilād al-Shām, but it needs to be

³⁰ For instance, Miller (1991); Brown (1992); Worschech (1984 and 1985); Johns *et al.* (1989); McQuitty and Falkner (1993); Mattingly (1996).

³¹ For the sake of convenience, dynastic labels are used in this discussion, but this is not meant to indicate that fluctuations in population levels are necessarily a direct corollary of political change.

³² For instance, Duc de Luynes (1871–76), I, p. 111; Tristram (1874), p. 176. Although note the changes described by Bell (1907), pp. 23–24. For the changes in levels of settlement in Jordan during the last decades of Ottoman rule, see Rogan (1999), pp. 72–94.

³³ Johns (1995).

³⁴ Johns (1995), pp. 3–4, 7–8.

recognised that the chronological parameters of many wares remain poorly defined. Currently, there is insufficient evidence from securely dated excavated contexts to create a reliable ceramic sequence for the entire Islamic period in central and southern Jordan,³⁵ and there is also little information concerning localised variations in specific wares. For instance, it is possible that relatively remote rural regions such as the Karak plateau and the areas south of the Wādī al-Ḥasā may have continued to employ vessel forms and modes of decoration that had ceased to be popular in Palestine or Syria some decades, or even centuries before. Apparent lacunae in the pattern of settlement on the plateau may therefore result from an inability to recognise the local pottery types of a particular period. As more information comes to light from excavations it may be possible to identify larger numbers of shards in the survey material as belonging to the presently under-represented Abbasid-Fatimid and late Mamluk-Ottoman phases.³⁶ Taking the historical and archaeological issues into consideration, a revised model would indicate a less dramatic reduction in the population after the end of the Byzantine period followed by a broadly consistent level of sedentary occupation until *c.* 1650.

A few preliminary points can be made about the pottery assemblages from Karak. Importantly, it is clear from the diversity and wealth of the ceramic material in, and around the citadel that these remains are the result of the consumption patterns of elite social groups. The majority of the items discussed in this study were imported from manufacturing centres beyond the Karak plateau. The fact that these objects were sometimes transported over considerable distances by land would certainly have added to their unit cost when they arrived in southern Jordan. The Karak assemblage also contains a small, but significant percentage of pottery that was of local manufacture including examples of lead-glazed, wheelthrown unglazed and handmade pottery. The handmade shards from Karak are consistent with the types of pottery found in large numbers by both excavations and field surveys on the rural sites of the plateau. This fact is important because it indicates an

³⁵ The first attempt to bring together the relevant archaeological evidence for the dating of Islamic pottery in Jordan was Sauer (1982).

³⁶ The early Islamic ceramic record of southern Palestine has been reevaluated in this manner. See Magness (2003). For a discussion of late Mamluk and Ottoman pottery in Bilād al-Shām, see Milwright (2000).

element of continuity between the consumption patterns of the town of Karak and the surrounding villages. Indeed, the great majority of the shards found in Middle Islamic assemblages on the plateau as a whole, and elsewhere in Jordan are from handmade vessels with, or without the addition of slip-painted decoration.

The specific characteristics of Middle Islamic handmade wares are discussed in greater detail in chapter 6, but some words are needed concerning the significance of handmade pottery for the understanding of the social and economic history of Karak and the surrounding region in the Middle Islamic period. The widespread adoption in rural communities of southern Jordan from the late eleventh century of the technique of forming ceramic vessels by hand represents a fundamental shift in the patterns of manufacture, distribution and consumption of ceramics. It has already been noted that the assemblage in Karak itself differs substantially from that of the surrounding rural communities, but it is important to see the consumption of pottery in the town and castle in the context of the material culture of the remainder of the plateau. The pottery assemblages of the plateau represent a base level against which the material from Karak can be measured. In addition, it is shown later that correlations between the ceramics found in Karak and in the surrounding communities are important for understanding of the ways in which the town functioned as the economic and administrative centre of the region.

Methodology and Chapter Outline

As already noted, this study makes use of information from historical and archaeological sources in the reconstruction of the political and economic history of Karak in the Middle Islamic period. Clearly, this is an issue that confronts all archaeologists (and art-historians) working in historical periods, as well as historians concerned with the utilisation of material culture in the reconstruction of past events. The emergence in recent decades of 'historical archaeology' as a distinct category has not been without controversy—not least in the insistence of many North American scholars that the term should only be used to refer to the archaeological study of material post-dating the European arrival in the Americas in 1492—but its very existence has served to bring into the foreground the methodological issues involved in integrating

textual sources and archaeological data.³⁷ A greater emphasis is being placed upon the critical evaluation of both historical and archaeological information, with neither being accorded a dominant position in the process of interpretation.³⁸ In addition, the insights of the *Annales* historians provide useful avenues of interpretation that help to escape from the chronological specificity of much of the information found in Arabic and Frankish chronicles and other texts of the twelfth to sixteenth century giving better correlations with the longer-term patterns drawn from the archaeological data.³⁹

While there are general methodological issues that face all those employing texts and archaeological artefacts in the reconstruction of aspects of the past, each period or region will also face specific challenges based on the extent and character of the available information. In the case of this project one of the limiting factors is the presence of major lacunae in both the historical and archaeological sources. Examples on the historical side include the absence of cadastral surveys of central and southern Jordan dating to the phases of Crusader, Ayyubid and Mamluk rule, while on the archaeological side one might point to areas of Bilād al-Shām where few excavations or surveys have been undertaken (particularly in Syria). Clearly there will always be gaps in the available evidence for any study of this nature, but a more serious challenge exists in finding ways to integrate information from very different sources. In the following paragraphs, I will outline the main characteristics of the textual and archaeological evidence, indicating important areas of bias that may affect their use in the process of historical reconstruction. I will suggest some of the ways in which larger chronological and spatial patterns or structures may be drawn out of these bodies of evidence for the purpose of reconstructing the political and economic history of Karak in the Middle Islamic period.

The historical sources utilised in this study are the Arabic and Western written records of the Middle Islamic period. Occasionally, Karak and the lands east of the Jordan river, Dead Sea and Wādī ‘Araba became

³⁷ Important recent discussions of ‘historical archaeology’ may be found in Small (1995); Funari, Hall and Jones (1999). For ‘Ottoman archaeology’ see Baram and Carroll (2000).

³⁸ For instance, Kosso (1995). Though now somewhat dated, also Champion (1990).

³⁹ For instance, see contributions by Smith, Fletcher and Sherratt in Knapp (1992). *Annales* approaches have been applied to Islamic material by Johns (1995) and Insoll (1999).

the focus of major political or military activity, but it should be stressed from the outset that the castle and its dependent territories generally remained on the periphery of political life in the Levant. The seats of government of the Islamic dynasties and the Crusader states were located in cities like Cairo, Jerusalem, Antioch, Acre and Damascus and it is from the perspective of these cities that most chronicles were written. Furthermore, Karak did not possess an al-Maqrīzī, Ibn Duqmāq or al-ʿUlaymī to detail the topography of the town or record the biographies of notable inhabitants.⁴⁰ As a result, one must reconstruct the history of Karak and the surrounding region from brief extracts in larger historical and geographical works. Other information is provided by monumental inscriptions, travellers' accounts, charters and other official documents of the administration of the Crusader kingdom of Jerusalem, and cadastral surveys of the region produced by Ottoman functionaries in the sixteenth century.

The historical section (part 1) is split into four chapters concerned with: the political history (chapter 2); the administration and state investment in Karak and the dependent regions including a survey of the surviving architecture in southern Jordan from the Crusader, Ayyubid, Mamluk and early Ottoman periods (chapter 3); the economic resources of the regions controlled by Karak during the Middle Islamic period (chapter 4); and a brief discussion of the most significant features of the data presented in the previous chapters (chapter 5). While the incomplete and partial nature of the historical sources presents a problem for all of these chapters, this deficiency is perhaps least important in the discussion of the political history because the aim of this chapter is to place Karak into the context of wider political developments in the Middle Islamic Levant.⁴¹ The intention of this detailed historical analysis is to show the reasons for the relative prominence of this, otherwise rather peripheral, military installation in the strategic considerations of Crusader and Muslim rulers. It is in chapters 3 and 4 that the

⁴⁰ Karak did attract some notable scholars and preachers, particularly to the court of the Ayyubid prince, al-Nāṣir Dāwūd. See Drori (2003), pp. 175–77. A few inhabitants of Karak did rise to relative prominence in the Middle Islamic period. One example is Abū al-Faraj al-Quff al-Karakī (d. 1286), physician to sultan Baybars. See Hamarneh (1974), pp. 53–77.

⁴¹ Studies concerning different phases of the political history of Karak include: Mayer (1990); Ghawanma (1982); Bakhit (1992); Rogan (1999). Karak also appears regularly in wider historical surveys such as Prawer (1969–70, 1972, 1980); Humphreys (1977); Irwin (1977); Bakhit (1982); Drori (2003 and 2006).

limitations of the written sources are more apparent. The record of the administrative structures existing within Karak and the dependent regions is patchy and there exist few detailed descriptions of the bureaucratic and military personnel who occupied the town and castle through the periods of Crusader, Ayyubid, Mamluk and Ottoman rule. Further, the available sources provide little information concerning the relationship between the administrative centre of Karak and the towns and villages of the dependent regions. State patronage in the region can be traced in architectural projects, monumental inscriptions and accounts in chronicles, though it is difficult to assess the fluctuations in levels of investment through the period as a whole. The discussion of the economic resources of the lands controlled by Karak (chapter 4) is presented as a diachronic survey and makes use of written sources from a wider timespan than covered by the previous chapters. It is assumed in this chapter that many aspects of agricultural cultivation and livestock rearing in southern Jordan continued, without substantial change before, during and after the Middle Islamic period.

Chapter 5 presents a short summary of the historical sources discussed in chapters 2, 3 and 4. The aim of this chapter is to trace significant middle-term and long-term trends within the historical evidence of greater relevance to the interpretation of the spatial and chronological patterns that have resulted from the analysis of the ceramic assemblages collected at Karak and the surrounding plateau. This emphasis on 'middle-term' and 'long-term' trends or structures is dependent upon the approach of the *Annales* historians. In particular, chapter 5 is concerned with two issues: first, isolating the phases of sustained state-sponsored activity in Karak and its dependent regions; and second, identifying the towns or regions that maintained consistent economic and political ties with Karak during the Middle Islamic period.

The presentation of the ceramic assemblage from Karak is directed toward two main goals: first, the creation of a ceramic sequence in order to identify the fluctuations in pottery consumption through the occupational history of the site; and second, the analysis of the distribution patterns for individual pottery types. The initial classification adopted in the catalogue (appendix 1) and the discussion of the ceramics (chapters 6–8) was based on the analysis of the physical characteristics of the ceramic shards. The pottery was assembled into conventional ware types based on technical features including method of manufacture (handmade, wheelthrown, mould cast), the type of ceramic fabric (earthenwares, stonepastes, stonewares and porcelain),

and glaze type. Within these large categories there are subdivisions according to features such as vessel shape or mode of decoration. The shared characteristics of each 'ware' are summarised at the beginning of each section in chapters 6 and 7.

The first stage of the analysis concentrates upon the chronological distribution. A typology was assembled and comparative material from other excavations was employed to suggest dating parameters for wares in the Karak assemblage. The aim of this process was to identify the pottery wares utilised in different phases of the occupational history of the castle. Clearly, the conclusions drawn from this analysis are reliant upon the precision of the dating provided by the excavated comparanda. It should be recognised, however, that the quality of the information from the excavation of Middle Islamic occupation levels in the Levant is variable and the dating parameters for many wares remain unacceptably broad. The second stage of the ceramic analysis looks at the distribution patterns for selected types in the Karak assemblage. The aim was to use ceramic distribution patterns in order to identify the extent of the commercial relations between Karak and the surrounding areas in southern Jordan, the urban centres of Bilād al-Shām, and the wider East Mediterranean region.

While the sophisticated distribution analysis found, for instance, in the study of Roman ceramics may represent a goal for the study of Islamic archaeology,⁴² a number of constraints exist which affect the scope of the present research. It is a commonplace of archaeological research to point out the gaps or inadequacies in the available published data, but this problem is perhaps more acute for those involved in the study of the material culture of the Islamic periods in the Middle East. Historically, archaeological research in Bilād al-Shām was driven by the study of Biblical periods and this emphasis has led to a concentration of excavations and surveys in the regions covered by Israel, the Palestine Authority and Jordan.⁴³ This geographical focus creates a natural bias in the distribution patterns, which is only now being rectified by the increasing level of archaeological activity in

⁴² For instance, Fulford (1977); Peacock and Williams (1986); Tomber (1993). Some studies have been made of the distribution of selected Crusader and Islamic glazed wares of the twelfth to fourteenth century. For instance, see Pringle (1982 and 1986); Kubiak (1998); Milwright (2003).

⁴³ The early history of Biblical archaeology is reviewed in Silberman (1982 and 1989).

Syria and Lebanon. A second problem relates to the variable quality of the published excavations. Although the situation is changing, the study of Islamic material culture was often given a low priority during the excavation seasons and, to an even greater extent, at the time of post-excavation analysis and publication. It is not uncommon to find the ceramics from Islamic phases only partially published, making impossible the statistical characterisation of pottery assemblages. In the last four decades, there have been a number of important excavations that have specifically targeted Byzantine and Islamic occupation levels, and many more multi-period excavations have adopted a responsible attitude toward the study of these later phases.⁴⁴ As the results of these excavations become available in published form, it should become possible to offer more refined analyses of pottery distribution during the Middle Islamic period.

The distribution maps created for selected pottery wares in the Karak assemblage must be viewed in the context of these limitations. The maps provide information concerning the occurrence of the ware on sites in Bilād al-Shām, but, given the uneven nature of the published material on which the maps are based, no attempt is made to indicate the relative frequency per site. The pottery wares chosen for distribution analysis in Roman archaeology often rely upon the fact that a common production site or region can be identified in each case. Establishing secure provenance for pottery wares is, however, more difficult in Islamic archaeology. Relatively few Middle Islamic kilns and pottery workshops have been identified in Bilād al-Shām and Egypt.⁴⁵ Furthermore, the variable quality of illustrations and descriptions of Islamic pottery finds presents additional problems for the collection of comparanda used in this study. Where appropriate, I have noted the nature of the relatedness between Karak pieces and their comparanda (profile, ceramic fabric, method of construction, glaze type, surface decoration, and so on). Petrographic analysis provides one of the most reliable means of

⁴⁴ Of course, there were archaeologists working earlier in the twentieth century who devoted considerable effort to the exploration and publication of the excavations of Islamic sites. In the context of the present study of Middle Islamic pottery in Bilād al-Shām, mention should be made of the publications of C.N. Johns (Athlith, Jerusalem Citadel), B. Bagatti (Ayn Kārim, Qubayba), S. Saller (Ayn Kārim, Ayzariyya/Bethany), A. Lane (al-Mīnā), R. de Vaux and A.-M. Steve (Abū Ghawsh), and P. Riis and V. Poulsen (Ḥamā). For a more detailed discussion of the study of Middle Islamic pottery in this region, see Tonghini and Grube (1989); Milwright (2000, 2001).

⁴⁵ See those mentioned in Milwright (2001).

establishing the degree of similarity between different shards,⁴⁶ but this method cannot be applied to large numbers of examples for reasons of practicality. Consequently, the petrographic analysis of a small sample from Karak was directed at testing hypotheses brought forward in the conventional distribution analysis.⁴⁷

The final aim of the analysis of the pottery from Karak is to classify individual wares as indicators of levels of economic activity and social complexity on the site. The consumption of different types of pottery from diverse regions is taken to be a reflection of the larger economic spheres of influence in which Karak operated during the Middle Islamic period. In this study, the numerous wares are arranged into three basic categories, defined as 'local distribution,' 'inter-regional distribution' and 'international distribution' ceramics. The general assumption behind the analysis of the distribution patterns of the pottery wares from Karak is that the more highly valued wares (or ceramic containers for valued commodities) would have been distributed more widely both within Bilād al-Shām itself and in the Mediterranean region. As suggested above, the relative value accorded to a given ware or vessel type might relate to factors including the labour and materials involved in its manufacture or the fact that it was a container for some other valuable commodity.

The first group ('local distribution') comprises wares that were manufactured and exchanged only in southern Jordan (i.e. south of the Wādī al-Mūjib). The second group ('regional distribution') comprises pottery for which distribution patterns can be identified in Palestine and Jordan, but not in significant numbers in central or northern Syria (i.e. north of Damascus), or Egypt. The third group ('international distribution') comprises two types: first, those imported into Bilād al-Shām; and second, those wares manufactured and used in the cities of Syria and Egypt, but also exported elsewhere in the Middle East and to other countries around the Mediterranean. These different levels of ceramic distribution are employed to show the changing nature of the consumption of pottery by the elite inhabitants of Karak. Furthermore,

⁴⁶ For a general discussion of the use of petrographic analysis in the study of Islamic pottery, see Mason (1991). Other scientific methods have also been employed for testing the ceramic fabrics and glazes of Islamic pottery. For example, see the results of neutron activation analysis discussed in Jenkins (1984).

⁴⁷ Mason and Milwright (1998).

it is demonstrated how this information can elucidate the varying economic roles of Karak during the Middle Islamic period: first, as the economic centre for the rural communities south of the Wādī al-Mūjib; second, as one of a series of regional markets in Palestine and Jordan involved in the exchange of raw materials and manufactured goods; and lastly, as a minor node in a much larger trading network controlled by the most powerful economic centres of the eastern Mediterranean.

PART ONE

THE HISTORICAL DEVELOPMENT OF KARAK
IN THE MIDDLE ISLAMIC PERIOD

CHAPTER TWO

THE POLITICAL HISTORY OF KARAK

Early Developments and the Creation of Crusader Oultrejourdain

At the end of November 1100 a party of 150 knights and 500 footmen led by the king of Jerusalem, Baldwin I arrived at the southern tip of the Dead Sea. From there, the company ascended to the eastern side of the Ghawr and, passing the villages of the plateau, travelled as far south as Wādī Mūsā. According to the contemporary chronicler, Fulcher of Chartres (d. c. 1127), they enjoyed three days of 'luxurious ease in that valley which was so rich in everything' before loading with provisions and making the return trip to Jerusalem.¹ In 1107 Baldwin ventured further with a party of 500 men in order to repulse the Turkoman amir, Işfahbad, who had been assigned the provinces of Wādī Mūsā, Ma'āb, Sharāt, Jibāl and Balqā' by Zāhir al-Dīn, the ruler of Damascus. Baldwin foiled the Turkoman amir's attempt to build a fort at Wādī Mūsā,² and in the same year the king ceded lands east of the Jordan river to the monks of Mount Tabor.³ A third excursion into Jordan in 1112–13 by the Crusaders succeeded, with the assistance of local bedouin, in capturing a caravan from Damascus passing through the region.⁴

The results of these three expeditions must have provided a powerful stimulus for Frankish expansion into Jordan. The region provided large areas of fertile agricultural land and, in addition, extensive revenue could be generated from the taxation or raiding of the commercial caravans passing east of the Ghawr. The Crusader victory over Saljuq forces at Tal Danith in 1115⁵ paved the way for a fuller development

¹ Fulcher of Chartres (1913), II.5.10 (trans. [1969], pp. 145–47). The first Crusader foray into northern Jordan is reported earlier in the same year. See William of Tyre (1986), ix.22 (trans. [1976], I, pp. 412–13).

² Ibn al-Qalānīsī (1908), pp. 158–59; Albert of Aix (1967), p. 644.

³ *Codice* (1733) II, no. 1: the letter was sent to the monks and ceded to them, 'ultra fluvium Jordanis. alia que a Turcis adhuc sunt possessa'. See also Mayer (1990), pp. 249–53.

⁴ Ibn al-Qalānīsī (1908), p. 183; Albert of Aix (1967), p. 693.

⁵ Fulcher of Chartres (1913), II.54.4 (trans. [1969], pp. 213–14).

of the lands south of the Yarmūk.⁶ During the fourth campaign into Jordan, Baldwin built the castle at Shawbak (named Montréal by the Crusaders because of its royal associations)⁷ and, in 1116, he rode with a small garrison to Ayla/‘Aqaba and appropriated the port.⁸ A fort may have been constructed there in *c.* 1116 although no evidence of this building has been located archaeologically.⁹ Baldwin settled Frankish farmers on land around Montréal and installed a garrison in the castle.¹⁰ At the same time Syrian Christians in southern Jordan were sent to repopulate Jerusalem.¹¹ Agricultural estates in Jordan were also given over to ecclesiastical lords at this time.¹² William of Tyre (d. *c.* 1186) mentions that the land around Shawbak, ‘has the advantage of fertile soil, which produces abundant supplies of wine, grain and oil’.¹³ It was the strategic significance of the fort, however, that predominated in the accounts of the Arab geographers; for instance, Yāqūt (d. 1229) states that, ‘owing to the construction the passage from Egypt to Syria was blocked’.¹⁴ Another Crusader force setting out in 1127 marched to Wādī

⁶ The region between the Yarmūk and the Zarqā’ river was disputed between Frankish and Muslim forces from 1105 until the eventual fall of the cave of Habīs Jaldak (Cave de Sueth) to Ayyubid forces in 1182. See William of Tyre (1986), xxii.16.12–18 (trans. [1976], ii, pp. 470–71). For the history and archaeology of Habīs Jaldak, see Nicolle (1988); Mayer (1990), pp. 277–78; Pringle (1997), p. 18, no. 2.

⁷ William of Tyre (1986), xi.26.15–33 (trans. [1976], i, p. 506): he notes that the lands of Jordan were a tributary to the Kingdom of Jerusalem before 1115. Albert of Aix ([1967], pp. 702–703) states that the castle was constructed in order to control the trade routes in the area. See also Fulcher (1913), ii.55 (trans. [1969], p. 215); Jacques of Vitry (1611), xxviii p. 1068; Tibble (1989), p. 30. For a plan of the castle, see Pringle (1993–), ii, p. 306, fig. 82; Pringle (1997), pp. 75–76, no. 157.

⁸ Fulcher of Chartres (1913), ii.56 (trans. [1969], pp. 215–16). The town of ‘Aqaba was probably sparsely populated as the result of a raid by the Banū Jarrāh in 1024 and earthquakes in 1068 and 1071 (although Fulcher’s account does mention that the inhabitants set sail from the town on seeing the arrival of the Crusaders). See Whitcomb (1990–91), p. 44. In 1118 Baldwin journeyed as far as Farāma and Tannīs in Egypt but died on the return journey. See William of Tyre (1986), xi.31 (trans. [1976], i, pp. 515–16); Prawer (1980), p. 478.

⁹ Pringle (1997), p. 113.

¹⁰ Pringle (1993–), ii, pp. 304–305. The Old French version of William of Tyre’s chronicle claims that the settled people comprised ‘knights, sergeants and paid viliens’. Pringle suggests that these groups might also have been required to act as the castle guard.

¹¹ William of Tyre (1986), xi.27.24–36 (trans. [1976], i, pp. 507–508); Prawer (1952), pp. 496, 502.

¹² *Chartes* (1880), nos.5, 6, 14, 18; Johns (1995), p. 11.

¹³ William of Tyre (1986), xi.26.24–24 (trans. [1976], i, pp. 506–507).

¹⁴ Yāqūt (1866–70), iii, p. 332.

Mūsā and took prisoner the inhabitants of the town.¹⁵ The construction of the castle at Shawbak brought the lands of southern Jordan (variously known in Crusader sources as ‘Oultrejourdain’, ‘Syria Sobal’, and ‘terra trans Jordanem’) under the control of the Kingdom of Jerusalem. The administration of Montréal and the surrounding territories was placed in the hands of a viscount appointed by the king.¹⁶

It is not clear from written sources precisely what sort of governmental structures existed in Jordan prior to the first Crusader expeditions. After the Islamic conquest Syria was split into a series of military governorships (*s. jund*): Ḥimṣ, Dimashq, Urdunn and Filasṭīn.¹⁷ Lands east of the Ghawr and south of the Yarmūk river became part of the *jund* al-Dimashq. This southern portion of the *jund* was split into the districts (*s. kūra*) of Ghawr (capital: Arīḥā/Jericho), Balqā’ (capital: ‘Ammān), Ma’āb (capital: Ma’āb/Rabba or Zughar), Jibāl (capital: ‘Arandal/Gharandal), and Sharāt (capital: Udhrūh or Zughar).¹⁸ Under the Abbasids it is probable that the administrative division of southern Jordan remained largely unchanged until the end of the ninth century. In the tenth century the *kūra* of Ma’āb may have been placed into the *jund* al-Filasṭīn, although the geographer and traveller Muqaddasī (d. 990) states that, by his time, Ma’āb had been incorporated into Sharāt.¹⁹ Muqaddasī’s account may describe a new administrative unit designed to take in all the land south of the Wādī al-Mūjīb. This is probably the arrangement which survived up until the arrival of the Crusaders although, in reality, it seems likely that neither the rulers in

¹⁵ Ibn al-Qalānīsī (1908), p. 218; Ibn al-Jawzā (1969), p. 566.

¹⁶ Mayer (1990), pp. 68–69; Tibble (1989), p. 30; Pringle (1993–), II, pp. 308–309, no. 229: a lost inscription, originally located above the doorway of the church in Shawbak reads, ‘UGO VICE...QVI...MCXVIII...LES’. This identifies the first viscount (*vice[comes]*) of Montréal as Hugo or Hugh. No other information is available concerning the identity of this man (I discuss the responsibilities of the viscount in chapter 3). The last word has been read by Pringle as *ecc[lesi]a(m)*. He also notes that the date of 1118 may refer to the consecration of the church or to some earlier event. Irby and Mangles ([1823], pp. 380–81), who saw the inscription in a more complete state in 1818, record that it also contained the name of the king, although they omit to name him.

¹⁷ For comments concerning the relationship of these administrative structures to those of the Roman and Byzantine periods, see MacAdam (1994), p. 50.

¹⁸ Alan Walmsley, ‘The Administrative Structure and Urban Structure of the Jund al-Filasṭīn and the Jund al-Urdunn: The Cities and Districts of Palestine and East Jordan during the early Islamic, Abbasid and early Fatimid Periods’ (Ph.D. thesis, University of Sydney, 1987) cited in Johns (1995), pp. 10–11. See also comments in Schick (1994).

¹⁹ Muqaddasī (1877), pp. 154, 155. For recent archaeological investigation of Gharandal, see Walmsley *et al.* (1998); Walmsley *et al.* (1999); Walmsley and Grey (2001).

Damascus nor the Fatimid caliphs in Cairo exerted much direct control over Jordan in the late eleventh and early twelfth century.

The history of the region in the period between the foundation of Montréal and 1126, when Pagan the Butler was established as lord of Oultrejourdain, has been subject of some debate in recent years.²⁰ William of Tyre names Romain de Puy of the first ruler of the ‘region beyond the Jordan’, and later notes that, after taking part in an unsuccessful revolt, Romain was dispossessed of his lands.²¹ On the face of it, this account seems to confirm that the first lord of Oultrejourdain was Romain, but objections to this interpretation have been raised by Stephen Tibble. He points out that while no Crusader source, other than possibly William of Tyre,²² discusses an internal revolt within the Kingdom of Jerusalem in 1126, there is evidence for a revolt in 1134 during the reign of king Fulk. Following the 1134 uprising it is documented that Romain was stripped of his territories all over the Kingdom of Jerusalem. If the possibility that he was allowed to rebel against the crown twice (in 1126 and 1134) is dismissed, then Romain cannot have been dispossessed of the lordship of Oultrejourdain in 1134 because it was already held by Pagan.²³ Tibble concludes that Romain’s only territories east of the Jordan were in the region of Balqā’ (*terra Belcha*), while the lands south of the Wādī al-Mūjib remained in the crown domain until 1126.

²⁰ See particularly, Mayer (1972), pp. 104–108; Mayer (1990), pp. 103–10; Tibble (1989), pp. 29–36.

²¹ The relevant passages read, ‘Romanus de Podio, dominus regionis illius que trans Iordanem’, and ‘...quidam nobilis homo, Paganus nomine, qui prius fuerat regius pincerna, postmodum habuit Terram trans Iordanem postquam Romanus de Podio et filius eius Radulfus, meritis suis exigentibus, ab ea facti sunt exheredes et alieni’. See William of Tyre (1986), xiv.15.5–6; xv.21.29–33 (trans. [1976], II, pp. 70, 127).

²² It is significant that even William of Tyre’s description of the dispossession of Romain de Puy does not provide the date at which it occurs.

²³ A charter dated 1161 gives Pagan as the first lord of Oultrejourdain and makes no mention of Romain. See *Regesta* (1893), no. 366. Tibble ([1989], p. 35) suggests that this follows the standard medieval practice of naming the ‘archetypical lord of the region’ in such official documents. The suggestion made by Mayer ([1972], pp. 106–107, n. 27) that the ‘Paganus Montis Regalis’ named in the charters of 1126 and 1132 (*Regesta* [1893], nos. 115, 142) may be a different individual from the Pagan the butler who became lord of Oultrejourdain seems implausible.

Crusader Karak

It was under Pagan that the construction of the present castle at Karak ('Petra of the Desert') was begun in *c.* 1142.²⁴ In the absence of a detailed architectural survey of the castle it is not possible to identify which sections of the present structure date from this first phase of Crusader construction. It is known that the Crusaders continued to construct the fortifications of the castle (and presumably, also around the town) at least into the 1160s.²⁵ Pagan did not choose a virgin site for his castle. In the late Byzantine and early Islamic period the town appears to have been enclosed by a fortified wall, although it is not known whether any of these defensive structures still existed in the twelfth century (see discussion in chapter 3). The town of Karak has a much more ancient origin; the name itself deriving from the Moabite, *q̄r* and the Aramaic, *karkha*.²⁶ Evidence from surface pick-up of shards from around the citadel indicates that the site has been occupied, with only limited lacunae, since the Chalcolithic period.²⁷ In the Roman-Byzantine period the town functioned at times as an administrative centre and occasionally even minted coins.²⁸ After 1142 Karak took over from Montréal as the administrative centre of Oultrejourdain.

Joshua Prawer argues that the construction of the castle at Karak must be viewed in the context of a larger policy of consolidation undertaken by king Fulk after the expansionist regime of Baldwin I earlier in the century.²⁹ King Fulk's policy was directed at three main objectives: to protect the arteries of communication through the kingdom; to defend the territorial gains made earlier in the century; and to encircle and neutralise any pockets of rebellion within the Frankish territories. These objectives were achieved through the construction of a number of castles all over the kingdom and the settlement of farmers around these new installations.³⁰ It is likely that the construction of a number

²⁴ William of Tyre (1986), xv.21.29–38 (trans. [1976], II, p. 127).

²⁵ The parts of the castle dating from the Crusader period include the northern wall and salients, the vaulted hall abutting the northern wall, the chapel, and the lower ward on the west side.

²⁶ 'Karak', *EI2*, IV, p. 609; Johns (1997), p. 280.

²⁷ Miller (1991), p. 89.

²⁸ Hill (1922), p. 27, pl. IV.14.

²⁹ Prawer (1969–70), I, pp. 328–32.

³⁰ Ellenblum (1995 and 1998) argues on the basis of archaeological and architectural evidence that Crusader knights established themselves in rural *burgi* in Samaria and

of smaller extant forts, including Wu‘ayra (Vaux Moïse) and Ḥabīs, can be dated to this period.³¹ The southern defences of Oultrejourdain were maintained with a fort at Ayla garrisoned by Crusader troops.³² Thought was also given to improving the transport and communications around the kingdom. In order to facilitate the transport of goods and men between Palestine and Oultrejourdain the Crusaders built ports on the east and west sides of the Dead Sea.³³

Pagan was succeeded in 1152 by his nephew Maurice, who continued work on the fortifications at Karak.³⁴ In 1161 Baldwin III gave the lordship to Philip of Nāblus of the Milly family in exchange for the title of prince of Nāblus,³⁵ and other fiefs in the Latin kingdom. The territory stretched from the Wadi Zarqā’ to the Red Sea being split into four districts: Wādī Mūsā, Shawbak, Karak and ‘Ammān. St Abraham (Khalīl/Hebron) and administrative responsibilities for the monastery of St. Catherine in the Sinai also formed part of the seigneurie given to Philip.³⁶ It was during the reign of Philip that building work on the castle was probably completed.³⁷ In 1167 Guericus, canon of the *Templum Domini*,³⁸ was appointed as archbishop of Petra and the metropolitan of Arabia with his cathedral located in Karak (probably on the site now occupied by the Congregational Mosque).³⁹

Walter of Beirut gained the right to the lordship after Philip by virtue of his marriage to one of Philip’s daughters. In common with his predecessor he was forced to sell his other estates to the crown in order to accede to the new title.⁴⁰ His tenure was dependent upon his wife’s line and, when both she and her daughter died in 1174, he lost control of Oultrejourdain. Milo of Plancy, seneschal of the kingdom

Galilee. Whether the same pattern of occupation was followed in frontier territories like Oultrejourdain is unclear.

³¹ For a review of these and the other probable Frankish fortifications, see chapter 3.

³² Pringle (1997), p. 113.

³³ Musil (1907–1908), I, pp. 170–71; King *et al.* (1987), pp. 439–46.

³⁴ For the rule of Maurice, see Mayer (1990), pp. 131–34.

³⁵ Jean d’Ibelin (1690), p. 282; *Tabulae* (1869), no. 3.

³⁶ Ernoul (1871), pp. 68, 71. For the lordship of Philip of Nāblus, see Mayer (1990), pp. 208–15.

³⁷ William of Tyre (1986), xxii.29.31–35 (trans. [1976], II, p. 499).

³⁸ De Sandoli (1974), p. 254, no. 344; Pringle (1993–), I, p. 287, no. 129; II, p. 310. The *Templum Domini* were probably the religious authority in Oultrejourdain before 1167. See Mayer (1990), pp. 221–28.

³⁹ William of Tyre (1986), xx.3.14–16 (trans. [1976], II, p. 346); Nicholson (1997), I.15.

⁴⁰ *Regesta* (1893), no. 454: Walter (Galterius) is named in a charter dated 1168. For the lordship of Walter of Beirut, see Mayer (1990), pp. 215–21.

under king Amaury I, was the next in the line but was murdered in the same year.⁴¹ In 1176, Reynald of Châtillon, previously the prince of Antioch, married Stephanie of Milly. In 1177 he took the title of lord of Oultrejourdain.

Reynald of Châtillon is perhaps the most notorious figure to be associated with Karak. In the Arabic chronicles he is consistently portrayed as the most treacherous of the Crusader nobles of the period, and the Crusader histories do not seek to paint him in a very much more favourable light. Numerous heinous acts are attributed to him during his time as prince of Antioch and lord of Oultrejourdain, including the torture of the Latin patriarch of Antioch, a raid on Byzantine Cyprus, and the ravaging of Muslim pilgrim caravans passing through southern Jordan and northern Arabia. For Muslim writers the most infamous of these episodes was the maritime expedition in the Red Sea (see below). From the point of view of the Franks his most serious crime would appear to be the breaking of the truce between Baldwin IV and Ṣalāḥ al-Dīn; an event that led ultimately to the Crusader defeat at Ḥaṭṭīn in 1187. Given the accumulation of later Muslim and European writing on the subject, it is difficult to assess the true character and motivations of Reynald. It seems likely that his fifteen year incarceration at the hands of the governor of Aleppo would have given him ample opportunity to nurture a profound hatred for his captors, and for Muslims in general. Further, his reputation for acts of cruelty against Muslims and, on occasions, Christians appears to be fully justified by the historical evidence. Perhaps more pertinent to this study is the extent to which Reynald, during the time that he was lord of Oultrejourdain, was acting independently of the objectives of the remainder of the Kingdom of Jerusalem.

Bernard Hamilton has argued that Reynald's actions following his release must be seen in the context of the politics and circumstances of the Kingdom of Jerusalem during the late 1170s and 1180s.⁴² He suggests that the animosity between Reynald and the influential chronicler William of Tyre has led to an underestimation of the former's achievements within the Crusader kingdom. Reynald proved his military worth by leading a Crusader force to victory over a numerically superior

⁴¹ Jean d'Ibelin (1841–43), I, p. 409; William of Tyre (1986), XXI.4.1–13 (trans. [1976], II, pp. 400–402). See also Mayer (1990), pp. 229–237.

⁴² Hamilton (1978).

Egyptian army at Montgisart in 1177.⁴³ Within the Kingdom of Jerusalem he is found mediating in political and ecclesiastical disputes. Perhaps most important for the present discussion is that Hamilton suggests that Reynald's activities in southern Jordan can be seen in the context of the wider relationship between the Crusader state and the Muslim polities of Syria and Egypt. In particular, he argues that Reynald's acts of raiding and piracy might well have been designed to divert the military resources of Ṣalāḥ al-Dīn away from their intended targets.

The territories of Oultrejourdain were prosperous in the mid-twelfth century. Before 1170 the area was largely untroubled by military conflict.⁴⁴ Writing in 1184, the Spanish Muslim traveller Ibn Jubayr (d. 1217) claimed that the regions controlled by Karak contained 400 villages.⁴⁵ Even with the loss of Balqā' in 1166,⁴⁶ the seigneurie continued to be of economic importance, supplying grain and other basic foodstuffs to Crusader towns in Palestine. The taxation and plundering of caravans passing between Syria and Egypt provided the lord of Karak with additional revenues. With the control of a network of powerful fortifications and a large military force at his command, the lord of Oultrejourdain wielded considerable influence in the court at Jerusalem. Political developments in the wider Levant in the second half of the twelfth century were to focus even greater attention upon the strategic importance of Karak and the surrounding territories.

Crusader expansion east of the Ghawr had been facilitated by the weakness of the political dynasties in Cairo and Damascus. 'Asqalān, the last Egyptian port on the Syrian littoral fell to Crusader forces in 1153 but, in reality, Fatimid influence in the south of Bilād al-Shām had been waning before the arrival of the Franks in Palestine. Syria was also politically fragmented at this time. In the first half of the twelfth century the rulers of Damascus had neither the military capacity nor the political will to offer much resistance to Frankish territorial expansion. This situation was to change in the second half of the century; the capture of Damascus by Nūr al-Dīn Maḥmūd b. Zangī, and the subsequent

⁴³ Ṣalāḥ al-Dīn appears to have regarded this as one of the most serious defeats of his career. See Hamilton (1978), pp. 100–101, n. 25.

⁴⁴ Although the Fatimids did organise a military expedition against Shawbak in 1157. See Bakhit (1997), p. 373.

⁴⁵ Ibn Jubayr (1907), p. 287. It should be noted, however, that Ibn Jubayr did not visit the Karak region and must have based his estimate upon secondary reports.

⁴⁶ *Chartes* (1907), no. 2.

creation of a unified Syrian state were followed by a resumption of hostilities with the Latin Kingdom in 1157. This development had an immediate impact on northern Crusader territories, but the central and southern Jordan was also affected as Nūr al-Dīn turned his attention to the expansion of his influence into Egypt in the late 1160s.

The details of the defeat of the Crusader expedition to Egypt in 1169, the deposition of the last Fatimid caliph in Cairo, and the elevation of Ṣalāḥ al-Dīn Ayyūb to the position of governor of Egypt in 1171 are not relevant to this discussion, but the results of these major events were to have an important impact upon the history of central and southern Jordan. The Crusader lord of Oultrejourdain now found himself in control of the principal means of communication between the two military forces of Egypt and Syria. Given that the Crusaders could expect that Ṣalāḥ al-Dīn and Nūr al-Dīn to follow similar policy objectives, this meant that the Kingdom of Jerusalem was now threatened on two fronts in a way that it had not experienced when Syria had been controlled by Sunni ruler and Egypt by a Shi'a caliph. The first expedition into the south of Jordan by Ṣalāḥ al-Dīn led to the capture of Ayla and Qal'at Ayla (also known as Île de Graye or Jarīrat al-Farā'ūn) in 1170.⁴⁷ Further military incursions by the Egyptian army into Frankish territory were severely hampered by bedouin raiding. Ṣalāḥ al-Dīn undertook a second major expedition to Jordan in 1172–73, apparently with the aim of making a punitive strike against the bedouin forces who had been collaborating with the Crusaders,⁴⁸ but there appears to have been little concerted effort to take the key castles of Karak and Shawbak. It is worth emphasising that no military force could expect to be able to control the lands south of the Wādī al-Mūjīb without having control of both Karak and Shawbak. The lack of resolve exhibited by Ṣalāḥ al-Dīn in these campaigns may result from the unease with which he would have viewed the opening of a free passage between Egypt and Syria. In the early years of the 1170s his relationship with Nūr al-Dīn had deteriorated, but he was not in a position to assert openly his status as an independent ruler of Egypt.

Following the death of Nūr al-Dīn, Ṣalāḥ al-Dīn moved to unify southern Syria and Egypt as a single state. Being in control of vast

⁴⁷ Ibn al-Dawādārī (1961–92), vii, p. 47; Nuwayrī (1923–92), xxviii, p. 391.

⁴⁸ Abū Shāma (1969), iv, pp. 156–57; Ehrenkreutz (1972), pp. 105–106.

resources and manpower, he was now in a position to prosecute his further territorial aims more effectively.⁴⁹ Where before 1174 the Crusader barony of Oultrejordain had represented for Ṣalāḥ al-Dīn a convenient buffer between him and his Zangid overlord, the establishment of a secure land passage from Cairo to Damascus through southern Jordan now became more of a strategic priority. Nevertheless, there appears to have been little military action against the Crusader territories in southern Jordan for the remainder of the decade. In the 1180s the activities of the Frankish occupants of Jordan began to highlight the dangers faced by Muslim pilgrims on the way to Mecca and Medina. In 1181 Reynald of Châtillon launched a raid from Karak against the *ḥajj* station of Taymā' and captured a caravan bound for Mecca. Diversionary raids by the governor of Damascus, Farrūkh Shāh on the lands around Karak forced Reynald's return.⁵⁰ Reynald's policy was to derive revenue either from the harassment of caravans passing through his territories, and in this he appears to have been aided by bedouin tribes who provided him with intelligence.⁵¹

Reynald's Red Sea expedition in the winter of 1182–83 again demonstrated the great strategic importance of Oultrejordain in the politics of the Islamic world.⁵² For descriptions of the naval expedition it is necessary to rely upon the accounts of Arab historians and travellers. Of the Crusader sources, only Ernoul (fl. late 12th) mentions it, and he characterises it as some sort of voyage of exploration. It has been suggested by Gary Leiser that the absence of information in contemporary European chronicles can be attributed to the fact that none of the Crusader participants in this audacious naval attack returned to provide an account of their exploits.⁵³ Reynald must have

⁴⁹ For the remainder of the 1170s and the early 1180s he concentrated his attention not on the Kingdom of Jerusalem, but against the Zangid princes in northern Syria and Mesopotamia. For a summary of this period of Ṣalāḥ al-Dīn's career, see Lyons and Jackson (1982).

⁵⁰ Maqrīzī (1934–72) i, p. 72; Abū al-Fidā' (1969), p. 50.

⁵¹ Lyons and Jackson (1982), pp. 156–57 (citing ms source of Qādī al-Fāḍil). It has been argued by Hamilton ([1978], pp. 102–103) that this raid was a deliberate attempt by Reynald to divert Ṣalāḥ al-Dīn away from marching north to Aleppo where the prince of the city had recently died.

⁵² For different interpretations of this event, see Leiser (1976); Hamilton (1978).

⁵³ Leiser (1976), p. 95. He also concludes that Reynald is unlikely to have participated personally in the expedition. Hamilton ([1978], pp. 103–104) characterises the expedition as being a complementary action to the Crusader offensive against Damascus. If this were the case, then the fact that the Crusader chroniclers do not even mention the existence of Reynald's plan is difficult to explain. Given the animosity of William

planned this enterprise for some time, because he first had to organise the construction of the ships. These were made in sections and carried by camel to the Gulf of 'Aqaba.⁵⁴ Both the camels and local intelligence were provided by the bedouin of the region. Once at sea the Franks must have made use of Muslim sailors (perhaps pirates) as guides in the difficult waters of the Red Sea. According to the two letters sent by Qāḍī al-Fāḍīl to the caliph in Baghdad, the fleet (probably consisting of about five boats) divided with two directed to besieging the 'fortress of Ayla'⁵⁵ and the remainder setting off south. The first target was the Egyptian port of 'Aydhāb where the Franks appear to have carried off substantial loot on their boats.⁵⁶ From there they set off across the sea to the port of Rābigh on the Arabian coast. The ultimate target appears to have been Medina and Mecca, but before getting there the Franks were intercepted by the fleet of the Ḥusām al-Dīn Lu'lu' who had been sent by al-Malik al-'Ādil in Egypt. Lu'lu' was able to use his considerable knowledge of the winds and currents of the Red Sea in order to intercept the Crusader ships, and then to scatter them.⁵⁷ The Frankish soldiers who went ashore on the Arabian coast were subsequently killed or captured. The captives from both halves of Reynald's fleet were sent to Mecca, Cairo and other cities where they were publicly executed.

In the absence of more reliable accounts of this episode from the point of view of the Crusader chroniclers, it is difficult to be sure as to the precise objectives of Reynald's naval expedition. What can be assessed more tangibly is the impact it had on the political and economic

of Tyre, it seems likely that he would have seized upon the opportunity to describe a military failure of Reynald.

⁵⁴ The boats may have been constructed on the Palestine coast at a port such as 'Asqalān. See Hamilton (1978), p. 103, n. 49.

⁵⁵ Given that the letter states that the first two ships prevented the occupants of the fortress from obtaining water and other supplies, al-Fāḍīl is presumably referring to the Île de Graye (Jazīrat al-Farā'ūn) off the coast from Ayla. The intention of this action was presumably to stop any of the occupants sending word to Cairo of the Crusader expedition. See Leiser (1976), pp. 91–92, 95.

⁵⁶ Ibn Jubayr also claims that they burned sixteen vessels as well as capturing a ship carrying pilgrims coming from Jidda and two more from Yemen loaded with goods for Mecca and Medina. They also ventured on land at 'Aydhāb and raided a caravan coming from Qūṣ. Quoted in Leiser (1976), p. 92.

⁵⁷ Biographies of Lu'lu' state that in the years prior to this event he had been involved in the equipping of ships carrying pilgrims across the Red Sea. See Leiser (1976), p. 93.

life of the Muslim Middle East.⁵⁸ For about forty-five days the Frankish fleet controlled all access to the Red Sea, and the implications of this fact cannot have been lost upon Ṣalāḥ al-Dīn. For the sultan personally, the Crusader raid into the Red Sea damaged his status as the defender of the Holy Cities. The deaths of *ḥajj* pilgrims, as well as merchants, can only have emphasised his failure in this respect. Further, if such a Crusader force were to become a presence in the Red Sea, this would impede future pilgrimage to Mecca and Medina from the west of the Islamic world. An active Frankish naval force could separate the Ayyubid territories in Yemen from the remainder of the empire and disrupt the trade in goods coming from the Indian Ocean to the ports of the Ḥijāz and Egypt. The collaboration of the bedouin in southern Jordan in the enterprise again illustrated the importance of keeping control of these groups by the use of financial inducements or the threat of military action.

A consistent assertion in the Muslim sources for this episode is that the ultimate goal of the raid was to dig up the grave (*ḥujra*) of the Prophet Muḥammad in Medina and return with the bones to the lands held by the Crusaders. Citing ‘Abd al-Laṭīf al-Baghdādī (d. 1231), Dhahabī (d. 1348) writes that the Franks of Karak and Shawbak ‘planned to charge the Muslims money in order to visit his body’.⁵⁹ This seems somewhat implausible, but Reynald may well have conceived of the physical remains of the Prophet as a potential bargaining chip in future negotiations, much as the Ṣalāḥ al-Dīn was later to do with the fragments of the ‘True Cross’ captured at Ḥaṭṭīn. As Leiser points out, however, neither Reynald nor Ṣalāḥ al-Dīn would have been able to predict the reaction that such a profoundly provocative act might have generated in the wider Muslim world. Rather than strengthening the Crusader hand at the negotiating table and capturing the imaginations of the rulers of Europe, it might well have caused the warring Muslim polities of the Middle East to form an alliance to prosecute the counter-crusade against the Kingdom of Jerusalem with much greater vigour.

In a belated response to Reynald’s naval expedition Ṣalāḥ al-Dīn twice besieged Karak in 1183 and 1184, ravaging the surrounding

⁵⁸ The points made here are a summary of the more detailed analysis given by Leiser (1976), pp. 96–98.

⁵⁹ Quoted in Leiser (1976), p. 93. For additional perspectives on Reynald and his understanding of Muslim relics and pilgrimage, see Milwright (2006b).

land.⁶⁰ Whether these sieges were meant as anything more than punitive exercises is not clear; both sieges were lifted after a relatively short period.⁶¹ It was only in 1187 when Reynald again broke the truce agreed between Baldwin IV and Ṣalāḥ al-Dīn⁶² that the latter declared a *jihād* against the Kingdom of Jerusalem, swearing to kill Reynald himself.⁶³ The victory over the Crusader forces at Haṭṭīn virtually eliminated the Frankish presence in the Levant. Reynald was captured and executed after the battle. According to contemporary sources it was Ṣalāḥ al-Dīn who, after having offered his captive the option of apostasy, struck the fatal blow with his sword.

Ayyubid Karak

In 1188 and 1189 Karak, Shawbak and the other castles of Oultrejourdain capitulated.⁶⁴ Although the Crusaders were to expand upon their minimal holdings at Tyre and ‘Asqalān and play a significant part in the politics of the Ayyubid dynasty in Syria, they never regained their foothold in the lands east of the Jordan river and Dead Sea Ghawr.⁶⁵ The southern passage between Egypt and Syria was now under the control of the Ayyubids. It is perhaps partly the keen awareness of the potential danger posed by enemy occupation of Karak, Shawbak and the other military installations east of the Ghawr which kept this,

⁶⁰ William of Tyre (1986), xxii.15.34–46; xxii.28. Lyons and Jackson (1982), pp. 216–18; Ibn Jubayr (1907), pp. 257–59.

⁶¹ It is noticeable that, despite the evident importance of the events in the Red Sea, Ṣalāḥ al-Dīn was not lured away from his ongoing campaigns in Harrān.

⁶² He raided a caravan passing through his territory. It has been suggested by Hamilton that Reynald may have held that the caravan was breaching the truce because it was ‘accompanied by... a large armed escort’. Ibn al-Athīr quoted in Hamilton (1978), p. 107.

⁶³ Lyons and Jackson (1982), pp. 249–51 (citing a ms source of Qāḍī al-Fāḍil): Ṣalāḥ al-Dīn also exacted retribution against Reynald by ravaging the countryside around Karak and Shawbak. See also Nuwayrī (1923–92), xxviii, p. 299.

⁶⁴ Bahā’ al-Dīn (1969), pp. 119–20; Geoffrey of Vinsauf (1848), pp. 83–84; ‘Imad al-Dīn (1972), p. 105. Some sources claim that Stephanie of Toron surrendered the castles in exchange for the release of her son Humphrey. For instance, see Nicholson [1997], i.15.

⁶⁵ Rey (1896), pp. 22–24: the title of ‘lord of the two Cracs’ (Karak and Shawbak) was passed on through the house of Toron until 1283. See *Regesta* (1893), no. 1056; Mas Latrie (1883), pp. 490–94.

otherwise peripheral, region very much in the domain of central government policy for the next two centuries.⁶⁶

In 1192 the lands of Egypt and Syria were divided amongst members of the Ayyubid family. These territorial divisions were to set the pattern for the period from the death of Ṣalāḥ al-Dīn in 1193 through to the eventual demise of the Ayyubid principalities following the Mongol invasion of Syria. Al-ʿĀdil, the brother of Ṣalāḥ al-Dīn, received Jordan south of Wādī Zarqāʾ and parts of Diyār Mudar and Diyār Bakr.⁶⁷ In this new confederation of semi-autonomous Ayyubid principalities the control of Karak and Shawbak retained a strategic and economic importance. The region produced a regular agricultural surplus while the local bedouin and sedentary population could be utilised as auxiliary troops. The defensive strength of the two main castles of the region made them suitable for numerous functions including storage and the garrisoning of troops. Al-ʿĀdil used Karak as one of his treasuries,⁶⁸ and even retained personal control of Karak and Shawbak when he became sultan in 1200.⁶⁹

The complex history of the later Ayyubid period is not of direct relevance to the present discussion, but it is possible to pick out some events during the first half of the thirteenth century that illustrate the changing status of Karak and its surrounding regions in the political life of Syria. The negotiations between the Crusaders and the Muslim forces following the capture of Damietta by the Crusaders in 1218–19 shed a revealing light on the perceived strategic importance of Karak and Shawbak. The offer made to the Franks for the return of the port was generous: the return of all the former territories of the Latin kingdom (including Jerusalem itself but excluding Karak and Shawbak), the fragments of the True Cross (lost at Ḥaṭṭīn), the release of captives, and a thirty-year truce. This offer was later improved to include a sum of 30,000 besants to compensate for the exclusion of the southern Jordanian castles.⁷⁰ The reason for the refusal by the Crusaders of both offers seems to have been the continued Muslim

⁶⁶ On the Ayyubid period in Karak, see Ghawanma (1982); Milwright (2006a).

⁶⁷ The complete list of territories allocated to the Ayyubid princes appears in Ibn al-Dawādārī (1961–92), vii, pp. 120–22.

⁶⁸ Maqrīzī (1934–72), i, p. 194; Ibn al-Dawādārī (1961–92), vii, p. 195.

⁶⁹ Humphreys (1977), p. 141. Maqrīzī (1934–72), i, p. 159.

⁷⁰ Maqrīzī (1934–72), i, p. 207; Ibn al-Dawādārī (1961–92), vii, p. 209; Abū al-Fidāʾ (1969), p. 97; Ernoul (1871), pp. 417, 464; *L'Estoire* (1967), pp. 340–42: the last author gives the figure of 15,000 besants per annum.

control of Karak and Shawbak. Neither could the Crusaders allow the presence near the southern part of their kingdom of such strongly defended enemy bases which might be used for further military campaigns, nor could the Muslims conceive of a return to the division of Egypt and Syria through Jordan.⁷¹ It is striking that the refusal of the Muslim forces to agree to the destruction of the castles of Karak and Shawbak was, according to Ambroise, also the main stumbling block in the peace negotiations between Richard I and Ṣalāḥ al-Dīn at the end of the twelfth century.⁷²

Under the rule of al-ʿĀdil and his son, al-Muʿazzam ʿĪsā, the region of Jordan remained under the administrative control of Damascus. The transition from provincial status to that of a semi-autonomous principedom occurred during the time of al-Nāṣir Dāwūd when he was assigned the castle of Karak and the surrounding area.⁷³ Despite the strategic and economic value of the lands east of the Ghawr, it would be unwise to overestimate the power enjoyed by the ruler of this region. Central and southern Jordan did not possess the military resources to challenge seriously the forces of the rulers of Cairo or Damascus. Al-Nāṣir's territorial aspirations were repeatedly thwarted and his continued autonomy in Karak was subject to the will of the sultan in Cairo.

After a series of military campaigns in the early 1240s by al-Ṣāliḥ Ayyūb, sultan of Egypt, there remained only three politically independent regions in Syria: Karak under al-Nāṣir Dāwūd; Salkhad under ʿIzz al-Dīn Aybak al-Muʿazzamī; and Banyās under al-Saʿīd Ḥasan b. al-ʿAzīz ʿUthmān. Although well defended, these towns were too small and disparate to offer any serious resistance to the sultan. Repeatedly in the middle of the thirteenth century the powerlessness of Karak and other remaining Syrian principalities was exposed when they came up against the military might of Egypt. Al-Nāṣir lost control of the region of Karak after his sons negotiated a settlement with al-Ṣāliḥ Ayyūb

⁷¹ Oliver of Paderborn (1894), iv.31 (trans. [1971], pp. 84–86). According to the translation, he states, ‘now there are two places [i.e. Karak and Shawbak] located in Arabia, which have seven very strong fortresses through which merchants of the Saracens and of pilgrims, going to Mecca or returning from it, usually cross; and whoever holds them in his power can seriously injure Jerusalem with her fields and vineyards when he wishes’.

⁷² Ambroise (1941), p. 291, ll. 7424–28. See also Nicholson (1997), iii.31 (p. 274). In an earlier passage (iii.23) the same source notes that Ṣalāḥ al-Dīn ordered the destruction of all captured fortifications except Jerusalem, Crac (presumably meaning Karak and Shawbak), and Darum (Dārūm near Gaza).

⁷³ On the rule of al-Nāṣir Dāwūd, see Ghawanma (1982), pp. 231–80; Drori (2003).

during his absence from the town in 1249. Badr al-Dīn Ṣawābī was sent to act as the sultan's governor.

Sultan al-Ṣāliḥ Ayyūb died in 1249 and was succeeded by his son, al-Mu'azzam Tūrānshāh. Realising that the son of al-ʿĀdil II, al-Mughīth Fakhr al-Dīn ʿUmar (at that time imprisoned in the citadel of Cairo) could provide a potential threat to his rule, the sultan had him exiled to Shawbak. In the chaos created by the second Crusader invasion of Egypt Tūrānshāh was murdered and the mamluk officer, al-Mu'izz Aybak, assumed command. Hearing of the assassination of Tūrānshāh, Badr al-Dīn Ṣawābī had al-Mughīth released and in 1250 Karak once again became an autonomous principality.⁷⁴ The events between 1250 and the recapture of Karak by sultan Baybars in 1263 are significant because they provide some useful indications as to why the castle retained such a special status during the Baḥrī Mamluk period.

Taking advantage of the unstable situation in Egypt al-Nāṣir Yūsuf, prince of Aleppo, marched south and took control of Damascus. In Egypt there was growing tension between al-Mu'izz Aybak and the Baḥriyya and Jamdāriyya brigades. Following the assassination in 1254 of their commander, Fāris al-Dīn Aqṭāy, the Baḥriyya (now under the control of Rukn al-Dīn Baybars) fled to Syria to join al-Nāṣir Yūsuf, at that time in Gaza. Al-Mu'izz Aybak met his death at the hands of the servants of Shajarat al-Durr and was replaced by his eldest son, al-Manṣūr ʿAlī. Real executive power, however, resided in the person of Sayf al-Dīn Quṭuz. Quṭuz lost little time in deposing the sultan and usurping the throne of Egypt.

The Baḥriyya soon became uncontrollable raiding in the countryside and, after a dispute over pay with al-Nāṣir Yūsuf, they offered their allegiance to al-Mughīth in Karak. Al-Mughīth used the remnants of al-Ṣāliḥ Ayyūb's treasury in the castle to buy the support of his new troops and to raise an army to make an assault on Egypt.⁷⁵ Al-Mughīth and the Baḥriyya set out with a small force made up of 700 cavalry, of which 300 were *muqātila* (probably local bedouin recruits).⁷⁶ Baybars appears to have developed his relationships with the bedouin as early as 1254, having met with the Banū Mahdī (possibly at Petra) when

⁷⁴ Ibn al-ʿAmīd (1994), p. 89; Ibn al-Dawādārī (1961–92), vii, p. 385.

⁷⁵ The presence of al-Ṣāliḥ Ayyūb's treasury at Karak is mentioned in Maqrīzī (1934–72) I, p. 338.

⁷⁶ Humphreys (1977), p. 332.

fleeing from al-Mu‘izz Aybak.⁷⁷ Two expeditions were sent against the Egyptian army but both proved inadequate to the task of defeating the numerically superior forces of Quṭuz.

The shadow cast over all Syria at the time of these events was the Mongol threat in the east. Al-Nāṣir Yūsuf, the sultan of Damascus appears to have possessed neither the will nor the manpower to offer serious resistance to the huge Mongol army gathered on the eastern border of his realm. Raiding in Palestine and the outskirts of Damascus by the Baḥriyya and the appearance of Louis ix’s army at Acre further undermined the position of al-Nāṣir Yūsuf. Although he managed to deal with the threat from al-Mughīth and the Baḥriyya,⁷⁸ he was unable to garner any military support from the Mamluk sultan Quṭuz for the defence of Damascus. Captured by the Mongol army, he was taken east to Tabrīz and subsequently executed. Al-Mughīth had offered his submission to the invaders before Kitbughā’s occupation of Damascus and was allowed to retain control of Karak.⁷⁹ The Mongol Ilkhān Hülegü appears to have appointed an official to supervise the administration of Karak, but this individual did not visit Karak before it was taken by Baybars in 1263.⁸⁰

The Mongol defeat at ‘Ayn Jālūt halted the westward expansion of the invaders and they were driven out of Syria. Seen in retrospect this was an event of fundamental importance in the history of the Middle East, but neither the Mamluks nor the Mongols regarded the battle as anything more than a temporary cessation of hostilities. The Mongols continued to view Syria and Egypt as targets for future territorial expansion and further military incursions occurred in 1261, 1280, 1299, 1301 and 1303.⁸¹ What the Mamluk victory at ‘Ayn Jālūt did achieve, however, was that it permanently altered the political balance between Egypt and Syria. Cairo was now established as the most important political centre in the region. The collapse of the Ayyubid

⁷⁷ Ibn al-Dawādārī (1961–92), VIII, p. 27; Maqrīzī (1934–72), I, p. 390–91; Zayadine (1985), p. 171.

⁷⁸ Ibn ‘Abd al-76), pp. 60–61; Maqrīzī (1934–72) I, pp. 414–16.

⁷⁹ William of Rubruck (1990), p. 184: He records meeting a messenger of Mughīth at the court of Hülegü in 1254, ‘we met there a Christian from Damascus. He said he had come on behalf of the sultan of Montreal and Crac, who wanted to become a tributary and ally of the Tartars’. See also Ibn ‘Abd al-Zāhir (1976), p. 122. Ibn al-Dawādārī (1961–92), VIII, p. 96; Amitai-Preiss (1995), p. 153.

⁸⁰ Amitai-Preiss (1995–97).

⁸¹ Irwin (1986), p. 34.

confederacy left the remaining principalities too weak and too disparate to offer any concerted threat to the Mamluk state. It was only a matter of time before Karak, Ḥimṣ and Ḥamā lost their autonomy and were incorporated into the administrative framework of the central government in Cairo. This was the political situation which Baybars would inherit and consolidate upon following his election as sultan by the leading amirs after the murder of Quṭuz in 1260.

The strategic position occupied by the castles of Karak and Shawbak (now garrisoned with Shahrazūriyya troops)⁸² meant that Baybars could not engage either Frankish or Mongol troops without the fear of having to deal with a second military assault coming from the south. The sultan could not allow a legitimate Ayyubid prince to remain in a position of such importance. Initially Baybars tried to induce the Shahrazūriyya to come over to his camp and, when this policy failed the sultan stormed Shawbak in 1261.⁸³ By the beginning of 1263 al-Mughīth's situation had become hopeless because of widespread defection from his camp. Baybars lured him out of Karak castle to negotiations at Baysān on the promise of safe passage. Al-Mughīth was arrested and tried for conspiring with the Mongols. His sons surrendered the castle to Baybars.⁸⁴

Baḥrī Mamluk Period

The capture of Karak paved the way for the vigorous military campaigns that were to characterise the remainder of the sultanate of Baybars. His efforts were now concentrated upon the destruction of key Crusader sites. In order to secure the pilgrimage route south of Jordan, Baybars ordered the governor of Karak to send the amir Amīn al-Dīn with a force of soldiers, Baḥrī mamluks, and bedouin to take the fort of Khaybar, located by an oasis about 100 miles north of Medina.⁸⁵ The southern Jordanian castles might also have an equally important function storing supplies of food and weapons. The castles

⁸² Ibn 'Abd al-Zāhir (1976), p. 122.

⁸³ Ibn 'Abd al-Zāhir (1976), p. 121.

⁸⁴ Ibn 'Abd al-Zāhir (1976), p. 163; Maqrīzī (1934–72), I, p. 491; Ibn Abī al-Faḍā'il (1916–20), I, pp. 451–52.

⁸⁵ Maqrīzī (1934–72), I, pp. 520–21; Nuwayrī (1923–92), xxx, p. 240: the latter source adds that bedouin (*imārat al-'urbān*) were included in this force.

of Karak, Salt, and 'Ajlūn appear to have functioned as arsenals for the Palestine campaigns.⁸⁶

Baybars was a regular visitor to southern Jordan in the 1260s and 1270s. For instance, in 1276 the sultan made the journey from Cairo to Karak in order to deal with a potential rebellion in the town.⁸⁷ The main reason for his frequent stays, however, was the need to meet with the local bedouin chiefs. Baybars' contacts with the bedouin of Jordan went back to 1254 and Nuwayrī (d. c. 1332) records another meeting at Shawbak in 1276 with the amirs of the Banū 'Uqba and others.⁸⁸ The Arab tribes of this region, and the Banū Faḍl further north, controlled the Badiya al-Shām. In addition, these nomadic groups represented a significant fighting force. The sultan relied upon the Syrian tribes and the Khafāja in Iraq for intelligence gathering,⁸⁹ and the bedouin also provided the Mamluk sultanate with vital supplies of sheep and horses. Throughout the Mamluk period Karak and Shawbak were important liaison points between central authority and the tribes.

Berke Khān succeeded his father Baybars as sultan on the death of the latter in 1277. The new sultan was soon forced to abdicate in favour of his younger brother, Salāmish, who was installed as a puppet ruler under the regnal title al-Ādil. Berke Khān was sent into exile to Karak but he was joined there a few months later by Salāmish. The younger sibling had been deposed by Qalāwūn in 1279.⁹⁰ Taking advantage of the political instability in Cairo, the governor of Damascus, Sunqūr al-Ashqar declared himself the sultan. He was supported by the children of Baybars, Salāmish and Khiḍr (both in Karak), the governors of Aleppo, Ṣafad, Ḥiṣn al-Akrād, Ṣayḥūn, and Ba'albak, and Sharaf al-Dīn 'Īsā b. Muḥannā, paramount shaykh of the Banū Faḍl. Although Qalāwūn managed to crush the rebellion, the episode emphasised the need first, to appoint reliable governors to the key positions in Syria and second, to retain good relations with the Arab tribes of the eastern desert.

⁸⁶ Ibn al-Furāt (1971), I, p. 104; II, p. 82; Ibn 'Abd al-Zāhir (1976), p. 162.

⁸⁷ Maqrīzī (1934–72), I, p. 264.

⁸⁸ Nuwayrī (1923–92), xxx, p. 230 (citing a lost section of Ibn 'Abd al-Zāhir, *Rawḍ*); p. 230. See also Zayadine (1985), pp. 170–71.

⁸⁹ Ibn 'Abd al-Zāhir (1976), p. 149. See also Amitai-Preiss (1995), pp. 144–46.

⁹⁰ Maqrīzī (1934–72), I, pp. 655–58. Holt ([1995], p. 19) describes Karak as an 'autonomous lordship' during the period it was occupied by Berke Khān, Salāmish and Khiḍr. Whether the administrative status of Karak changed during this short episode is not clear.

It was during the reign of sultan al-Nāṣir Muḥammad ibn Qalāwūn and his successors that Karak assumed its most central role in the politics of the Mamluk sultanate. Al-Nāṣir's periods of exile before 1310 were spent in Karak and he used his last stay to build up the support he required to reclaim the throne by force.⁹¹ During his periods of exile he developed, like Baybars before him, close relations with the local bedouin, and these groups constituted a large part of the military force he employed during his return to Egypt (the remainder being composed of his own mamluks and some of the Maṣṣūrī amirs). The Arab tribes were to remain an important part of his policy-making during the rest of his rule. Robert Irwin has suggested that it is from this time that one can see the beginnings of the 'cult of the bedouin' that was to become such an integral part of the Baḥrī Mamluk identity.⁹²

Al-Nāṣir Muḥammad's third rule witnessed the stabilisation of the borders of the empire. In 1312 the attempted Mongol invasion under the command of Öljaytū Khudābanda was repulsed at Mardīn. The diminished threat from the south and east (planned alliances between the Rasulids and the Mongols were averted by Mamluk expeditions to Yemen in 1315, 1322 and 1331), and the eradication of the Crusader presence on the mainland after 1291 reduced the strategic status and, consequently, the extent of the military presence in southern Jordan.⁹³ The opening of frontiers with the Ilkhanate in the 1320s led to the resumption of overland trade from the east. The major beneficiary of this change was the city of Aleppo but the other provinces of Bilād al-Shām also experienced the economic benefits of the increased commercial traffic through the country bound for Egypt. In relation to southern Jordan it should be emphasised that most of the trade caravans headed from Syria to Egypt would have made use of the route through Palestine and along the north coast of the Sinai.

Karak enjoyed a high profile in the political life of the fourteenth century. As part of their education, al-Nāṣir Muḥammad sent his sons, Anūk, Ibrāhīm and Aḥmad to Karak where they could experience life

⁹¹ Maqrīzī (1934–72), II, p. 44; Abū al-Fidā' (1983), p. 48.

⁹² Irwin (1986), p. 106.

⁹³ 'Umarī (1988), p. 237: Shawbak at least was demilitarised at this time: writing in the 1340s, 'Umarī notes that there were no troops stationed at Shawbak and the doors of the castle were shut. Ibn al-Jazarī (d. 1338) ([1949], p. 28, no. 155) reports that in 1292 the entire citadel of Shawbak was demolished with the exception of the donjon (*qulla*).

with the tribes firsthand.⁹⁴ The attachment felt by the sons of al-Nāṣir Muḥammad for life in southern Jordan is most vividly illustrated by sultan Aḥmad's dramatic departure from Cairo with the royal insignia, the contents of the royal treasury, and flocks of livestock to establish a new capital at Karak in 1341–42.⁹⁵ The remoteness of Karak from the centres of political and economic power meant that such an endeavour was doomed to failure, but it indicates the trust that the Qalāwūnid sultans felt in the defensive strength of the castle and the support they could expect from the local population. It took eight expeditions by the new sultan, al-Şāliḥ Ismā'īl, to recapture Karak. The town finally fell because Aḥmad's *muqaddam* and chief confidant, Bāliḡ b. Yūsuf b. Ṭayyī, betrayed his master by surrendering the castle to Egyptian forces in 1344 in return for substantial *iqṭā'*s for himself and his kinfolk.⁹⁶ Aḥmad was executed in the same year and the remnants of the royal treasury were returned to Egypt.⁹⁷ Later, another of the Baḥrī sultans, al-Nāṣir Ḥasan, was to try and escape from Cairo and the overpowering influence of the amirs to the relative safety of Karak. He was captured and killed before reaching his destination.

Burjī Mamluk Period

With the exception of Sha'bān II (r. 1363–76), very few of the remaining Baḥrī sultans were able to establish a firm grip on the throne. In part this must have been caused by the chaos following the periodic waves of the Black Death through the empire,⁹⁸ but mainly it was due to the continuing power struggles amongst the Mamluk elite. The last Qalāwūnid sultans were no more than puppet rulers operated by the powerful amirs. One such amir was Barqūq who served as *atābak al-ʿasākir* (chief of the army) first under al-Manṣūr ʿAlī (r. 1376–82) and then under the last of the Qalāwūnid line, sultan Ḥājjī II (r. 1382). In 1382 Barqūq took the throne for himself. Soon after, he was forced to deal with rebellion in Syria. The rebellion was led by the governor of

⁹⁴ Maqrīzī (1934–72), II, pp. 332–33.

⁹⁵ On the political circumstances of al-Nāṣir Aḥmad's reign, see Drori (2006).

⁹⁶ Bauden (2004), pp. 67–69 (citing Shujāʿī and Maqrīzī).

⁹⁷ Maqrīzī (1934–72), II, p. 655; Shujāʿī (1977), pp. 269–70.

⁹⁸ Dols (1977), p. 62. Karak, like other provinces of Bilād al-Shām was badly affected by the epidemics.

Aleppo, Yalbughā al-Nāṣirī, an amir dismissed from court, Tamurbughūr al-Afḍalī (also known as Miṇāsh), and a number of other Syrian governors. Included in this last group was Ma'mūr al-Qalamṭāwī, governor of Karak, who surrendered the citadel to the rebels 'with all the money and arms which were there'.⁹⁹ By 1389 this bitter confrontation had reached as far as Cairo itself. Seeing that his position was hopeless, Barqūq attempted to flee the capital, but was captured and sent to imprisonment in Karak.

Barqūq appears to have built up a good rapport with the local governor and his gaoler, Ḥusām al-Dīn Ḥasan al-Kujkūnī, and he escaped the town with the enthusiastic support of the inhabitants of Karak. He then travelled north to Damascus and launched his bid to regain control of the empire. Even before this episode Barqūq had been in negotiations with Ibn Khāṭir, chief of the Banū 'Uqba, who had acknowledged the former's suzerainty and presumably pledged military support.¹⁰⁰ Although Barqūq, as sultan, rewarded both the inhabitants of the town and specific individuals who had aided his escape from captivity with his patronage, Karak started to fall from the status it had enjoyed under the Baḥrī sultans. There was even a rebellion against the local governor by the townsfolk in 1397.¹⁰¹ Fighting was also recorded in Karak two years later between the ancient Arab factions of Qays and Yaman.¹⁰²

The rule of Faraj, son of Barqūq, saw one more example of Karak being used as a base for a rebellion,¹⁰³ but it becomes more difficult to identify references to southern Jordan in the Mamluk sources of the fifteenth century. This tendency was part of a general shift of emphasis toward the capital in Egypt and away from the regions. With Arab historians now primarily concerned with an increasingly Egyptian perspective, it becomes more difficult to discern the actual economic and political significance of the provinces of Syria within the empire as a whole. Thus, the apparent lack of sultanic interest in Karak can be

⁹⁹ Ibn Taghrībirdī (1909–36), v, p. 406.

¹⁰⁰ Ibn Taghrībirdī (1909–36), v, p. 475.

¹⁰¹ Ibn al-Furāt (1936–42), ix, p. 462; Lapidus (1976), p. 52.

¹⁰² Maqrīzī (1934–72) iii, p. 1001. Disputes are also recorded in the south of Bilād al-Shām in the sixteenth century. See Bakhit (1982), p. 214 (citing Mūhimme Defteri, vol. 14, no. 973); and Heyd (1960), pp. 85–86, no. 39. Khalil was a Qaysī stronghold in the eighteenth century. See Volney (1959), pp. 341–42. For a general discussion of Qays and Yaman, see *EP2*, iv, 'Qays 'Aylān', pp. 833–35.

¹⁰³ Ibn Taghrībirdī (1909–36), vi, pp. 240–42.

seen as part of the larger process of the marginalisation of the Syrian regions from the political life of the Mamluk state.

Some idea of the continued economic and strategic status of the *mamlaka* of Karak is to be found in the careers of those who served as *nāʾib* of the region. The appointment of governor of Karak still carried considerable political influence and a number of these men rose to high rank in Egypt or Syria after serving in this capacity.¹⁰⁴ Southern Jordan must have still derived a good revenue from its agricultural produce because there is a case of the appointment of the governorate of Karak-Shawbak being made in 1453 to Yashbak Ṭāz al-Muʿayyadī for an unspecified sum of money (this practice is also recorded for other governorships).¹⁰⁵

The maintenance of good relations with the bedouin tribes had been a key feature of the Bahārī Mamluk policy and this was one of the reasons why Karak and Shawbak remained on the Syrian itinerary of the sultans. Although the thirteenth and fourteenth centuries were not without reports of Arab uprisings in Southern Jordan,¹⁰⁶ both the harassment of caravans and other serious incidents become commonplace as the fifteenth century passed. For instance, in 1453 the *nāʾib* of Karak, Āqbirdī al-Minqār, was killed by bedouin.¹⁰⁷ The fifteenth-century historian Maqrīzī attributed the growth in strength of Banū Numayr and the Banū Rabī to the instability created by the civil war between sultan Aḥmad and the Egyptian amirs in the 1340s. Aḥmad appears to have used much of the gold in the treasury to buy the support of the bedouin groups prior to the capitulation of Karak in 1344.¹⁰⁸ It is tempting to ascribe the growth of bedouin raiding also to the apparent lack of personal meetings between the sultan and the chiefs of the powerful tribes of the southern desert. With many of the provincial governors turning their energies toward political life at the political centre in Cairo, it is possible that the military resources no longer existed to deal with marauding Arab tribes. In 1462, in one of the most serious incidents, the sultan had to send the combined might of amir Ināl al-Ashqar and the governors of Karak and Gaza

¹⁰⁴ For instance, examples of later Mamluk *nāʾibs* of Karak who later became governor of Damascus are listed in Ibn Ṣaṣrā (1963), I, pp. 237, 241; II, pp. 181, 183; Laoust (1952), pp. 5, 8, 9, 10, 15.

¹⁰⁵ Ibn Taghrībirdī (1954–60), VI, p. 89–90, n. 253.

¹⁰⁶ For instance, see Maqrīzī (1934–72), II, pp. 798–89.

¹⁰⁷ Ibn Taghrībirdī (1909–36), VII, pp. 232, 377.

¹⁰⁸ Maqrīzī (1934–72), II, p. 799.

to ‘Aqabat-Ayla to fight the chief of the Banū ‘Uqba, Mubārak, who had attacked the *hajj* caravan from Egypt.¹⁰⁹

While there is no reason to assume that the sporadic references to bedouin insurgence through the Burjī period indicate an unchanging linear decline in the effectiveness of central authority at Karak,¹¹⁰ it is clear that by the latter part of the fifteenth century the Mamluk state was experiencing greater difficulty in enforcing its will. The governor had to flee from the town in the years 1506–1507 because of a rebellion.¹¹¹ Order was temporarily restored with the appointment of Qāyṭbāy al-Khāṣṣakī, formerly the commander of troops in Damascus to the governorship in 1512.¹¹² Two more military expeditions had to be equipped by Sībāy, the governor of Damascus and sent to pacify the tribes around Karak in the final years of Mamluk rule.¹¹³

Ottoman Rule and the Rise of Tribal Power

Following the battle of Marj Dābiq, Syria fell to Ottoman forces in 1516. The new regime did not seek immediately to set up new administrative structures and, in some cases, Mamluk officials were retained in their previous positions or even promoted. Janbirdī al-Ghazālī had served as governor of Jerusalem and Karak in 1509, then Şafad in 1511, and Ḥamā in 1513.¹¹⁴ Under his new masters he was promoted in 1518 to the governorship of the new province of Damascus: an administrative area which ran as far south as ‘Arīsh and encompassed the *mamlakas* of Şafad, Tadmūr, Nāblus, Jerusalem, Gaza and Karak-Shawbak. He was killed in the following year after a failed rebellion and an Ottoman governor, Iyās Pāsha, was installed in his stead.¹¹⁵ It was at this

¹⁰⁹ Ibn Taghrībirdī (1909–36), vii, pp. 749–50.

¹¹⁰ Fabri (1843–49), ii, pp. 144–45: the author, travelling through the Dead Sea Ghawr in the 1480s, mentions the widespread fear of attack by bedouin tribes. This fear was not, however, a new phenomenon. Burchard of Mount Sion, two centuries before was cautioned against visiting the Dead Sea because of the danger of bedouin attack (he subsequently found this to be untrue). See Burchard of Mount Sion (1896), p. 59.

¹¹¹ Ibn Iyās (1960–74), iv, p. 94.

¹¹² Laoust (1952), p. 113.

¹¹³ Ibn Iyās (1960–74), iii, p. 433; Laoust (1952), p. 124.

¹¹⁴ Ibn Iyās (1960–74), v, pp. 383–84; Bakhīt (1982), p. 19.

¹¹⁵ Ibn Iyās (1960–74), v, pp. 382–83; Laoust (1952), pp. 151–59, 171–74; Bakhīt (1982), pp. 35–36.

time that the new administrative arrangements of the province were established. The major towns were given a governor (*sanjaqbey*), each one subordinate to the *beylerbey* in Damascus. One of the major landmarks of Janbirdī al-Ghazālī's tenure was making safe the pilgrimage route south from Syria. In order to achieve this he combined negotiation, patronage and military force; a policy which had worked well in the Bahrī Mamluk period. Using captured prisoners as a bargaining tool, he was able to conclude a peace treaty with the Jughaymān tribe in 1519. Although the treaty had later to be backed up by another punitive expedition, he appears to have made the road to the Holy Cities passable. Later in the same year the largest pilgrim caravan in seventy years set out from Damascus.¹¹⁶

The provinces of Bilād al-Shām were not of great importance to the Ottoman empire in the sixteenth century. The region contributed little either in revenue to the coffers of Istanbul or in military assistance for campaigns.¹¹⁷ The need to achieve the minimum objective of ensuring the safety of routes through Southern Jordan led the governors in Damascus to appoint the *sanjaqbey* of this southern region from the ranks of the powerful local families. An example of this practice was Qānṣūh b. Musā'da b. Muslim ibn al-Ghazzāwī who was appointed as *sanjaqbey* of Karak-Shawbak in 1551 and of 'Ajlūn in 1564. Qānṣūh's suitability for the post depended upon the maintenance of close relations with the Arab tribes (most importantly in this period the Banū Aṭīyya, Hawayṭāt, Banū Lām and al-Mafārija).¹¹⁸

Qānṣūh came into conflict with Damascus over his failure to keep up payments on the money borrowed to buy the position of *sanjaqbey*. There were also complaints that he had appropriated money destined for the repair of *hajj* stations. Qānṣūh was deprived of his territories, although he was made *amīr al-hajj* in 1570. He was, however, given the governorship of Karak-Shawbak again in 1572.¹¹⁹ In later years the descendants of Qānṣūh tried to regain control over the lands of Karak and the title of *amīr al-hajj* but none managed to elicit sufficient support

¹¹⁶ Laoust (1952), pp. 153–54; Bakhit (1982), pp. 21–22.

¹¹⁷ Heyd (1960), pp. 117, 119 (citing Mühimme Defteri, vol. xxiii, no. 724).

¹¹⁸ Bakhit (1982), pp. 194–95 (citing ms of Quṭb al-Dīn al-Nahrawālī, *al-Fawā'id al-saniyya fi'l-riḥlat al-madāniyya wa'l-rūmiyya*).

¹¹⁹ Bakhit (1982), pp. 214–15 (citing Mühimme Defteri, vol. xiv, no. 973, p. 675; no. 1152, p. 794; no. 1692, p. 1149). See also Abu Husayn (1985), pp. 164–65.

from both the influential local families and the Ottoman authorities in Damascus long enough to retain power.¹²⁰

Southern Jordan did not make any major contribution to the finances of the empire and so there was little incentive for the state to invest in the infrastructure of the region beyond that required to achieve the core objective of safe passage for caravan traffic. The passing references in the latter half of the seventeenth century onwards are to military expeditions sent out from Damascus. Attempts were made to pacify southern Jordan in 1655–56 and 1669–70.¹²¹ In 1678–79 the governor of Damascus, ‘Uthmān Pāsha stormed Karak castle and executed the town notables. In an effort to restore order, he placed a Damascene garrison inside the castle. Another expedition was sent in 1710–11.¹²² This, and other similarly brutal expeditions had the basic aim of keeping the *hajj* caravan free from harassment but did little to address the fundamental problems of the lack of central authority and an administrative framework within the region.

The decline in the fortunes of southern Jordan had already started in the late Mamluk period but the Ottoman policy toward the region further reduced the levels of sedentary population and agricultural prosperity.¹²³ The decision to appoint local chiefs to key positions in the *sanjaqs* of Jordan and southern Palestine may be seen as a reflection of the reduced power of the Ottoman *beylerbey* over the regions of Bilād al-Shām. Bakhit argues that the peace treaty with Austria signed in 1606 allowed the sultan to devote more resources to ensuring internal stability within the empire as a whole. By 1635 the local factions had been eliminated in Damascus and this appears to have paved the way for greater prosperity in Syria in the latter part of the seventeenth century.¹²⁴

Karak remained, however, on the periphery of the empire operating in essence as an autonomous city state, although the regions south

¹²⁰ The political history of this period is summarised in Abu Husayn (1985), pp. 171–83.

¹²¹ Nimr (1975), I, pp. 75–80, 101; Johns (1995), p. 26.

¹²² Laoust (1952), pp. 219, 231.

¹²³ The loss of security in the region appears to have encouraged the remaining sedentary population to move to less accessible, but more easily defensible, highland regions. Analysis of archaeological surveys on the Karak plateau, suggests that, by the sixteenth century the majority of the occupied villages were clustered around the south-western fringes of the plateau. See Brown (1992), pp. 440–42.

¹²⁴ Bakhit (1982), pp. 230–31.

of the Wādī al-Mūjib maintained some links to Palestine through the activities of merchants from Khalīl and Jerusalem.¹²⁵ By the end of the eighteenth century the town of Karak and the plateau were under the control of the Majālī family.¹²⁶ The strong fortifications around Karak made it an attractive bolthole for those resisting the authority of the Ottoman state. So it became when one of the leaders of the Palestinian revolt against the Egyptian occupation, Qāsim al-Aḥmad fled to Karak following a defeat in Khalīl. In the summer of 1834 the forces of Ibrāhīm Pasha, son of the ruler of Egypt, Muhammad ‘Alī laid siege to Karak and, following its capture most of the insurgents were executed.¹²⁷ A contemporary source records that the houses of Karak were systematically looted and a scorched earth policy was adopted for the town and its surrounding lands.¹²⁸ Many of the Christian occupants moved to Jerusalem, although it appears that Karak had been rebuilt by 1856.¹²⁹ Ottoman central control only began to be reasserted in the last decade of the nineteenth century, although attempts to collect taxes were recorded in the 1860s and 1870s.¹³⁰ In 1895 Karak was made the capital of a regional governorate that included Balqā’ and territories

¹²⁵ For instance see Burckhardt (1822), pp. 417, 427; Irby and Mangles (1823), p. 382.

¹²⁶ At the time of Burckhardt’s visit to Karak Yūsuf Majālī had been given the title of ‘Emir of all the Bedouins to the south of Damascus, and as far as the Red Sea’ by the Meccan shaykh Ibn Sa‘ūd. Quoted in Rogan (1999), p. 31.

¹²⁷ For a review of the events of the rebellion, see Rogan (1999), pp. 31–32.

¹²⁸ Neophytos of Cyprus trans. in Spyridon (1938), pp. 115–18. Describing the aftermath of the capture Neophytos writes, ‘When the Christians had left, he ordered that the famous fortress be pulled down and all the houses razed to the very foundations. It was an easy thing to pull down the houses with the help of picks and crowbars, but it was difficult to level the fortress which was built of ashlars. This irritated the Pasha who told them to use powder. They used many barrels of powder to blow up this mighty fortification and wall. The noise of the mine when it exploded was heard in Jerusalem which is 100 (Italian) miles, as the crow flies from Kerak. He demolished the town, and left it a heap of charred stones, with little prospect of its ever being rebuilt. He ordered also that the trees—olives, figs and vines—should be rooted out and burnt. Among the ruined cities of this part, this one must also be included, and little trace of any of them is left. For who could live in such a city when the most essential and the most necessary thing is missing, namely water? In that place there is no spring, and they had to collect rain water in large cisterns. These cisterns were now broken and filled with earth and stones’ (pp. 116–17).

¹²⁹ Spyridon (1938), p. 117, n. 1; Abujaber (1989), p. 33; Johns (1995), p. 27.

¹³⁰ Abujaber (1989), p. 125, nn. 44–47 (citing oral testimony and Public Record Office FO 195/675); Oliphant (1880), p. 287; Musil (1907–1908), III, pp. 89–91; Johns (1995), p. 28. Unsuccessful attempts to collect tax were made on behalf of the Wahhābīs. See Burckhardt (1822), p. 383.

as far south as Maʿān, and in 1896 there is record of an Ottoman garrison was stationed in Karak.¹³¹

The descriptions written by Western travellers indicate that the early decades of the twentieth century witnessed an overall increase in the population and the return of sedentary occupation to many of the uninhabited villages east of the Ghawr.¹³² There is evidence to suggest that the Majālī rulers of the Karak plateau were involved in policies of regeneration prior to the restoration of Ottoman control, although whether these had any impact upon population levels and agricultural productivity in the region is difficult to assess.¹³³ The population increases experienced in the late nineteenth and early twentieth centuries in Balqāʾ and ʿAjlūn districts do appear to have been attributable—directly or indirectly—to Ottoman policies in the region. Settlement patterns south of the Wādī al-Mūjīb did not alter to the same extent during this period due to the maintenance of tribal authority in the governance of the region. In particular, there was no resettlement by Circassian and Chechen immigrants onto abandoned villages as happened further north. Indeed, there was even a migration of Christians from Karak to repopulate the site of Mādabā in 1880 and 1881. The brutal suppression by the Ottoman authorities of a revolt in Karak in 1910 further undermined the economic and demographic recovery of the region.¹³⁴ It was not until later in the twentieth century that the Karak plateau began to transform into the populous agricultural region it is today.

¹³¹ Rogan (1999), p. 55; Cuinet (1896), p. 329.

¹³² For instance, see Bell (1907), p. 23. Brown notes that travellers in the nineteenth century may have underestimated the population of the Karak plateau because they were unaware of the extent of cave occupation. See Brown (1992), pp. 464–46. Cave dwelling is reported in earlier sources. See Fulcher of Chartres (1913), II.5.2 (trans. [1969], p. 144); Thietmar (1851), p. 40.

¹³³ Duc de Luynes (1871–76), II, pp. 111–13; Johns (1995), p. 29.

¹³⁴ These issues are discussed in greater detail in Rogan (1999).

CHAPTER THREE

ADMINISTRATION AND ARCHITECTURAL PATRONAGE IN KARAK AND ITS DEPENDENT REGIONS

This chapter looks at the administrative structures introduced within the territories controlled by Karak in the Crusader, Ayyubid, Mamluk, and Ottoman periods. The discussion of the administration is also concerned with identifying the composition of the military and bureaucratic populations active in the castle through the Middle Islamic period. The other theme of this chapter is state investment in Karak and its dependent regions. Investment in the region was intended to achieve several functions. Expenditure by the state officials was directed toward: establishing order; maintaining the infrastructure necessary to facilitate the collection of revenues from agricultural or industrial production; and the efficient movement of commodities, communications and people through the region. Both Crusader and Muslim administrations allocated funds for the construction and maintenance of religious buildings in the regions under their control. State investment might take forms such as the construction or repair of buildings and roads, or the allocation of lands and other revenues in return for services rendered to the state. The chapter is divided into sections that deal with the activities of the Crusader, Ayyubid, Mamluk and early Ottoman administrations. The last part of each of these sections provides a brief account of the architectural patronage (as it is known from extant buildings, monumental inscriptions, excavations and references in written sources) in central and southern Jordan during these periods.¹

¹ The comments made in this chapter concentrate on the historical and geographical patterns of architectural patronage in central and southern Jordan by the Frankish and Muslim states. For this reason, the architectural descriptions of individual buildings are very brief. For detailed discussions of the architecture of these periods, see: Deschamps (1939); Mumani (1998); Pringle (1993–, 1997, 2001); Walmsley (2001). References to specific buildings are given in the notes below. Domestic architecture is not covered in this chapter. For this subject, see McQuitty (2001), pp. 571–75.

Crusader Period

In the years following 1115 the castle of Montréal and its surroundings remained as crown *demesne* (fig. 3). A damaged inscription from Shawbak dated 1118 names Hugo (or Hugh) as the viscount of the region.² There was also a castellan installed by the king to run the castle itself. The viscount and the castellan were responsible for the administration of the judiciary and the military as well as the collection of revenues in the area.³ These officials would have employed a number of additional functionaries (dragomen, scribes and sergeants). Of more direct interest to this study, however, is the period after Oultrejourdain became an independent lordship under Pagan because it was during his tenure that Karak became the principal administrative centre.⁴ The transition of Oultrejourdain from the status of royal *demesne* to a seigneurie required the establishment of new governmental structures to cope with the duties that would previously have been organised from Jerusalem.

Documentary sources provide some evidence concerning the number and composition of the administrative posts in Karak after *c.* 1142. The internal organisation of the royal court was echoed, on a smaller scale, in the courts of the major lords. The *Assises of Jerusalem* contain a list of the baronies and seigneuries having the right of '*cour, coins et justice*'. These terms signified: the right to hold court within one's domain; the right to strike a lead seal; and the power to dispense justice (excluding certain offences such as treason which would be tried in the court of the king). Oultrejourdain was one of thirty-six lordships granted these privileges.⁵

² Tibble (1989), p. 30; Mayer (1990), pp. 68–69; Pringle (1993–), II, pp. 308–309, no. 229. For reading of the inscription, see chapter 2, n. 16. A report for the year 1107 claims that the lands around Shawbak were tributary domains of Baldwin I under the supervision of al-Aṣḫāhīd al-Turkumānī. See Bakhit (1997), p. 373.

³ Mayer (1990), pp. 67–68. The posts of viscount and castellan may have been fulfilled by the same man. Mayer ([1990], pp. 69–78, 84–91) has traced the names of other viscounts of the region in this early Crusader period.

⁴ The precise status of this lordship is unclear. Jean d'Ibelin claims that the lordship of Karak, Montréal and St Abraham could not be classed as a barony because it did not provide 100 knights for the Kingdom of Jerusalem. Other sources of the period do refer to it as a barony, however. See Edbury (1997), pp. 113–14, 193.

⁵ Jean d'Ibelin (1841–43), I, p. 419. The *Assises of Jerusalem* do not make clear when the seigneurie of Oultrejourdain was granted an *haute cour* and the other administrative bodies associated with a Crusader lordship.

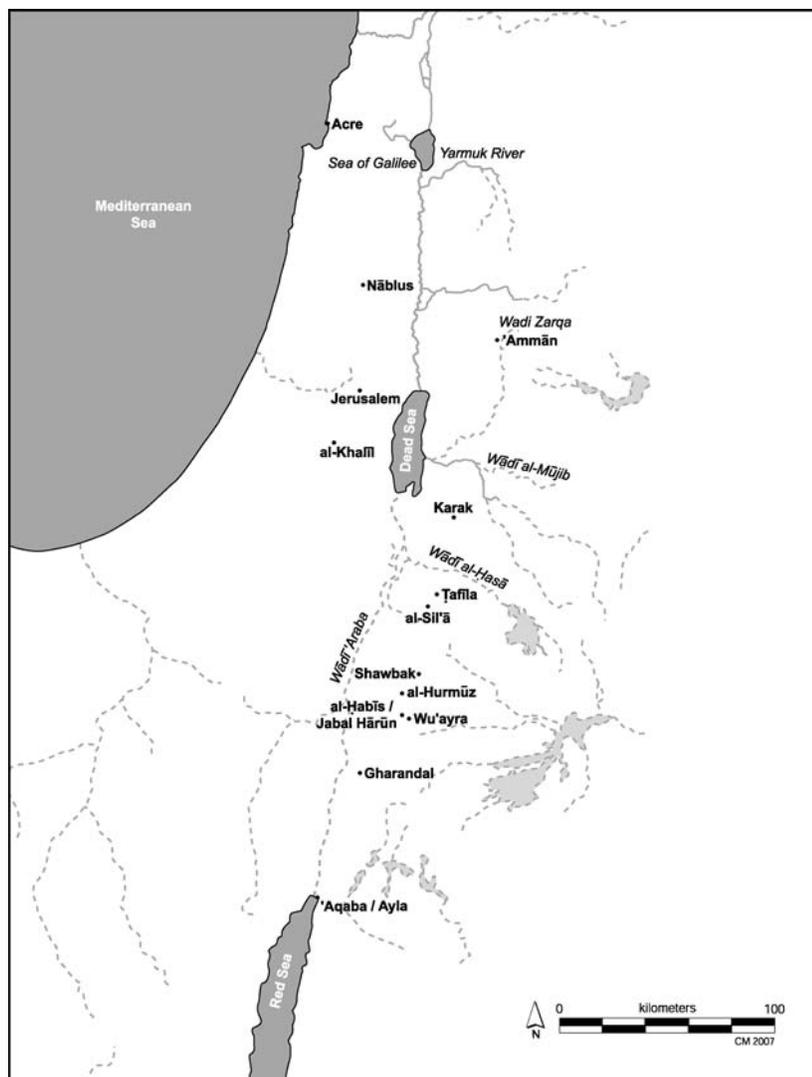


Figure 3. Map of Jordan during the Crusader period.

The first officer of the *cour* was the seneschal. In the court he was the lord's representative in the case of the latter's absence. More important were his administrative responsibilities which were to be in charge of the bailiffs and clerks of the treasury and the *secrète*, the office set up to oversee the collection of tax, to produce cadastral surveys, and to record the sale or transfer of property.⁶ The competence of the seneschal extended to the supervision of the castles of the seigneurie and the administration of rent and taxation. The next most important positions in the *cour* were those of the constable and the marshall. The duties of these two posts were primarily military. According to the *Assises of Jerusalem*, the lordship of Oultrejordain contained neither post because there were not sufficient knights to merit them.⁷ In Oultrejordain the running of the military was probably left to the commander of the castle, the castellan.⁸ There were also castellans stationed in Shawbak, Wu'ayra and Khalil.⁹ The duties of the chamberlain and the butler covered the maintenance and finances of the personal household of the king or lord.¹⁰ The term '*coins*' refers specifically to the right to use a lead seal and, thus, possess a chancery.¹¹ A main function of the chancery was the confirmation of fiefs. One example of a seal used by a Crusader lord of Oultrejordain survives, that of the last incumbent, Reynald of Châtillon (pl. 1).

According to the *Assises of Jerusalem*, the lord of Oultrejordain was obliged to provide forty knights from Karak and Montréal for the defence of the Crusader state. When Reynald of Châtillon was lord

⁶ Setton (1955–85), v, pp. 220–21; Prawer (1972), p. 144, n. 17; La Monte (1932), p. 167, n. 2. There is no documentary evidence to confirm the presence of a *secrète* in Oultrejordain although it is thought that all seigneuries in the Latin Kingdom contained this office. A charter dated 1243 does contain references to the office of *secrète* in Acre and Tyre. See *Chartes* (1899), no. 71.

⁷ Jean d'Ibelin (1841–43), I, pp. 417–18; Edbury (1997), pp. 113–14, 193.

⁸ *Regesta* (1893), nos. 279, 596: these documents (dated 1152 and 1180) mention a certain Johannes as castellan.

⁹ *Regesta* (1893), nos. 279, 551, 366; *Regesta Additamentum* (1904), no. 623.a; Mayer (1990), pp. 154–55; Pringle (1993–), II, p. 374. Pringle (1997), p. 50, no. 101: the remains of an apparently twelfth-century fortification existed on the south-west face of the Herodian precinct at Khalil. It was demolished in the 1960s.

¹⁰ *Regesta* (1893), no. 366; *Tabulae* (1869), no. 3: the services of a Johan Goumans/Gotman are included in the charter assigning the territories of Oultrejordain to Philip of Nāblus. The document does not specify the duties of this individual but he appears to have been appointed directly by the king. See also Mayer (1990), pp. 154, 163–69; Edbury (1997), pp. 142–43.

¹¹ For the seal of Reynald of Châtillon, see Deschamps (1939), fig. 6; Clermont-Ganneau (1885–1907), III, pp. 129–34.

of Oultrejourdain he also held the fief of Khalīl (St Abraham) which contributed another twenty knights.¹² This number was part a total of 577 drawn from all the fiefs of the Latin Kingdom.¹³ In addition, each town and abbey was expected to send a fixed number of sergeants. There are no specific figures for the towns of Oultrejourdain but a total of 5,025 is given for the kingdom.¹⁴ Each seigneurie would thus have yielded between nine and ten times as many sergeants as knights for military service (giving an approximate figure of 360–400 men for Karak-Shawbak and 180–200 for Khalīl). Towns also had to provide soldiers for the defence of the town walls. Both the king and the lords would recruit additionally from the native population.

Each knight would be allocated a fief to provide him with a fixed income to cover his expenses. Recent studies have suggested that there is evidence that in areas such as Galilee and Samaria knights actually built dwellings in their fiefs, but whether this practice extended to the frontier territories of the Kingdom of Jerusalem is unclear.¹⁵ LaMonte estimates that the value of a single fief could range from 400 to 1,000 besants.¹⁶ There is no list of all the fiefs within Oultrejourdain but there are references in charters and other sources to some of them. When Baldwin first built the castle of Montréal, William of Tyre records that he granted ‘extensive possessions’ in the area to the garrison although no details are given concerning the manner in which the lands were distributed.¹⁷ Documents from later in the twelfth century preserve the names of some of the fiefs allocated to knights in the lands of Oultrejourdain: these are Canzir (Khānzīra), Hobelet (or Obelet), Traphyla (Ṭaffīla), Beni Salem, Moïse (Wādī Mūsā), Ahamant (‘Ammān) and Gerba (Wādī Jurba).¹⁸

¹² Jean d’Ibelin (1841–43), I, pp. 418, 422; Edbury (1997), pp. 118, 196. Discussing the services owed by the city of Acre, the *Assises* (Jean d’Ibelin [1841–43], I, p. 425; Edbury [1997], pp. 121, 198) also mentions a noble called Michael of Sinai who was required to provide one knight to the Kingdom of Jerusalem. *Les Gestes des Chiprois* (1967) II, p. 819. This source claims that Karak and Montréal contributed sixty knights.

¹³ Riley Smith (1973), p. 17: the author estimates that the Latin Kingdom could mobilise as many as 700 knights.

¹⁴ Jean d’Ibelin (1841–43) I, p. 427; Edbury (1997), pp. 125, 199: the Archbishop of St Abraham was required to provide fifty sergeants in times of great need.

¹⁵ Ellenblum (1995); Ellenblum *et al.* (1996). The identification of ‘manor houses’ that may have been occupied by Frankish knights was based upon the observation of construction techniques in extant buildings and the analysis of documentary sources.

¹⁶ La Monte (1932), p. 150.

¹⁷ William of Tyre (1986), XI.26 (trans. [1976], I, p. 506).

¹⁸ Ernoul (1871), p. 68. *Regesta* (1893), no. 542: Martin, seigneur of Ṭaffīla is recorded

In the Frankish states there existed a number of administrative units beneath the *haute cour*. The court established to look after the affairs of the Frankish landowners (burgesses) was the *cour des bourgeois*. There were thirty-seven of these courts listed in the *Assises of Jerusalem* including one each in Karak and Montréal.¹⁹ The court was composed of twelve jurors appointed by the lord of the city and headed by a viscount. The viscount and two judges (*magister*) of Karak are mentioned in a document dated 1177.²⁰ The viscount also held the position of chief of police and employed a group of sergeants to assist him in his work. His second in command, the *matheseb*, retained both the title (in a corrupted form) and many of the duties of the Arab market inspector (*muhtasib*).²¹ The presence of the *cour des bourgeois* in both Karak and Montréal suggests an active Frankish population in the two towns involved in agriculture and commerce. There were also courts for the native Muslim and Christian communities. Each of these courts was presided over by a lay head of the community (*raʿīs*). In some towns these locally run courts were replaced by the *cour de la fonde*. The *Assises* do not state whether these organisations existed in any of the towns of Oultrejourdain.

Outside of the power of the seigneur of Karak and Montréal were religious orders like the Hospitallers and the Latin Church. Lands and privileges were assigned to these religious institutions. For instance, in 1152 Maurice gave to the Order of the Hospital the lower bailey of Karak castle, a house next to his own in Shawbak (probably located within the castle), the fiefs of Canzir and Beni Salem, and free use of boats for taking provisions across the Dead Sea in return for agreeing to provide some of the defence within Karak castle. The right to free passage across the sea was later confirmed by Reynald of Châtillon in

in a document of 1177. *Regesta* (1893), no. 454 mentions Garin de Hobelet. The fief of Hobelet is probably located on the hill named Hoboul Ezzekia, east of Karak. See Deschamps (1939), p. 38, 64 n. 2; William of Tyre (1986), xxii.30 [29], xxii.31.6 (trans. [1976], ii, pp. 499, 503). *Regesta* (1893), no. 279: both Canzir and Beni Salem were given to the Hospitallers in 1152. See also Rey (1883), p. 395; and Rey (1896), p. 19. Gerba is described as being in the vicinity of Shawbak. See William of Tyre (1986), xx.16.47 (trans. [1976], ii, p. 472). The *casalia* of Coreb, Antiochet and Beteligene may also have been located in Oultrejourdain. See *Diplôme* (1900–1901), p. 315; Clermont-Ganneau (1885–1907), v, pp. 77–78.

¹⁹ Jean d'Ibelin (1841–43), i, chapt. ccl.xx; Edbury (1997), pp. 116, 194. Praver (1972), p. 146: the author has traced a total of forty-two *cours des bourgeois* in the Kingdom of Jerusalem.

²⁰ *Regesta* (1893), no. 551.

²¹ Riley Smith (1973): the author discusses the minor administrative positions in the Kingdom of Jerusalem.

1177.²² A village (*casal*) called 'Hara' in the region of Wādī Mūsā was also given to the Hospitallers in c. 1160 by Joseph and John, sons of Saba son of George. The village had been given to Saba by Baldwin II.²³ Land in Oultrejourdain was owned by the religious orders.²⁴ In addition, a charter dated 1217 states that the Abbey of St Catherine in Sinai possessed houses and agricultural land in Wādī Mūsā, Shawbak and Karak.²⁵ The Templum Domini is also recorded as owning houses and vineyards around Shawbak in a charter dated 1166.²⁶

As the political and economic importance of Oultrejourdain increased in the Kingdom of Jerusalem, so did its religious status; in 1167 an archbishop was installed in Karak (he had previously resided at either Buṣrā or 'Ammān).²⁷ There were no other Latin bishops in Oultrejourdain, although several sources claim that the archbishop had a Greek Orthodox suffragan at Mount Sinai.²⁸ Whether the Orthodox bishop of 'Faraon', actually came under the jurisdiction of Guerricus, the archbishop of Petra of the Desert (Karak) is open to doubt, however.²⁹ Nobody succeeded Guerricus as the Metropolitan of Petra.³⁰ The lord of Karak also had a personal chaplain who presumably led the worship in the castle chapel. It is not known how many priests held this post between 1142 and 1188, but four individuals are recorded in charters.³¹ A charter of 1181 also records the presence of a dean, an archdeacon,

²² *Regesta* (1893), nos. 279, 551; *Codice* (1733), I, no. 62, p. 62.

²³ Pringle (1993–), II, pp. 376–77, no. 278.

²⁴ *Chartes* (1880), no. 18; *Regesta* (1893), no. 134. Philip donated property and land in Khalīl and Oultrejourdain to the Templum Domini. See *Diplôme* (1900–1901), p. 315; Clermont-Ganneau (1885–1907), v, pp. 77–78.

²⁵ *Regesta* (1893), no. 897; Pringle (1993–), I, p. 293, no. 131.

²⁶ *Regesta Additamentum* (1904), no. 422a; Pringle (1993–), II, p. 305.

²⁷ Jean d'İbelin (1841–43), I, p. 415: 'l'arcèveque dou Babbat que les Grecs apelent Filadelfe, qui au tens le rei Amauri, fut translaté au Crac, et est appelé l'arcèveque de la Pierre dou Desert'. See also Jacques of Vitry (1611), xcvi (p. 1119); Geoffrey of Vinsauf (1848), pp. 83–84. It has been suggested that the town of Rabba, north of Karak may have been a metropolitan within the patriarchate of Antioch from the seventh century through into Crusader times. See Zayadine (1971).

²⁸ Anonymous Pilgrims (1894), p. 31 (probably written after 1198); Jacques of Vitry (1611), lvi (p. 1077); Edbury (1997), pp. 112, 192; Pringle (1993–), I, p. 287.

²⁹ Edbury (1997), p. 182.

³⁰ Thietmar, in 1217, mentions a Latin bishop at Shawbak. See Mayer (1990), p. 124 (citing an unspecified ms source). A colophon in a ms in the Armenian Patriarchate library, Jerusalem records the donation of a Bible to the church of St. George of Karak by king Leo IV of Cilicia following a visit to Jerusalem in 1329. See Pringle (1993–), I, p. 295, no. 133.

³¹ These are Rainard (1152), Lawrence (1168), William (1177) and Nicholas (1180). See *Regesta* (1893), nos. 279, 454, 551, 596, 607; Pringle (1993–), I, pp. 287–93, no. 130.

a cantor, three priests and a subdeacon at Karak.³² There may have been an unsuccessful attempt to move the remains of St Catherine from the monastery in Sinai to Karak.³³ Whether this action was intended to elevate the cathedral in Karak to the status of a focus for pilgrimage is not clear, although the acquisition of relics (through barter or theft) appears to have been relatively common practice amongst religious institutions in medieval Europe.³⁴

The bedouin tribes within the Kingdom of Jerusalem were counted as crown property. They paid pasturage rights to the king and remained under his jurisdiction.³⁵ Reynald of Châtillon and other Crusader lords used the bedouin extensively as guides and for intelligence gathering,³⁶ and it is possible that the harassment of caravans passing through the region was done with the tacit support of the authorities in Karak.

The Crusader conquest of central and southern Jordan was a gradual process, starting with military expeditions in the period between 1100 and the foundation by Baldwin I of the first castle, Montréal (Arabic: Shawbak), in 1115. The decision to incorporate these lands into the Kingdom of Jerusalem necessitated the construction of a network of castles and smaller fortifications. These military installations provided protection for the Frankish settlers who moved into the fertile lands of southern Jordan as well as adding to the defences of the lands west of the Jordan river and Dead Sea Ghawr. The castles also became the centres for the administration of the new lordship of Oultrejourdain. The architecture of the period up to 1188–89 was not limited to military structures, however; churches and some secular structures have also been identified in surveys of central and southern Jordan. In architectural terms, this is the best known period in the medieval history of the region and the comments made below rely on the detailed research of Paul Deschamps, Denys Pringle, and others listed in the notes.

The first major castle built by the Crusaders south of the Wādī Zarqāʾ was situated at the summit of a conical hill at Shawbak (pl. 21). Founded by Baldwin I in 1115, it was named Montréal. The substantial

³² *Regesta* (1893), no. 607.

³³ Thietmar (1851), p. 47. Thietmar does not give the name of the noble of 'Petra and Scobach' (i.e. Karak and Shawbak) who was eager to move the relics of the saint, but Reynald is a plausible candidate.

³⁴ For a discussion of this phenomenon, see Geary (1986).

³⁵ *Regesta* (1893), no. 36. See also Prawer (1980), p. 214.

³⁶ For instance, Abū Shāma (1969), iv, pp. 156–57, 232 (quoting a letter written by Qāḍī al-Fāḍil); Bahāʾ al-Dīn (1969), p. 306.

nature of the new installation was an indication of the intention of the Franks both to settle the surrounding area (Wādī al-Bustān beneath the castle provides a fertile and sheltered area with springs that is well suited for cultivation) and to control the commercial caravans passing through the south of Jordan. Much of what remains today can be dated to the thirteenth century, but some comments can be made about the design of the Frankish fortress on the basis of observations by Denys Pringle and a recent survey conducted by Nicholas Faucherre.³⁷ Thietmar, who visited the site in 1217 and thus saw the castle prior to the Mamluk reconstruction of the curtain wall and towers, provides valuable evidence. He was evidently impressed by what he saw and writes that the castle was enclosed by a triple line of walls.³⁸ Thietmar's description may indicate that the suburb (*faubourg*) allocated to the Frankish settlers was enclosed within the third line of walls, though there is little evidence to support this.³⁹ William of Tyre's account of Shawbak as comprising 'a wall, towers, an outer wall and ditch' is, however, more in keeping with the surviving remains.⁴⁰ Pringle suggests that the main entrance to the Frankish castle was located on the east side and led into the outer bailey. On the south side, the inner gate led into the upper bailey.⁴¹ The best surviving parts of the Frankish castle are the two churches (see below) and those parts of the curtain wall that were encased within the Mamluk fortifications of the late thirteenth century.

Karak citadel is the largest of the surviving fortifications in central and southern Jordan and is still one of the most impressive examples of medieval military architecture in the Middle East (pls. 7–12). The first phase of Frankish construction on the site can be dated on historical grounds to c. 1142 during the tenure of Pagan the Butler, though it

³⁷ On the Crusader and Muslim military architecture of Shawbak, see Mumani (1988), pp. 243–93; Brooker and Knauf (1988), p. 185; Brown (1988); Kennedy (1994), pp. 23–25; Pringle (1997), pp. 75–76, no. 157 (with an extensive list of earlier sources); Pringle (2001), p. 678. For the most recent survey of the Crusader and Mamluk phases, see Faucherre (2006). His detailed study of the masonry styles and architectural features has provided a much clearer picture of the plan and elevation of the curtain wall of the castle.

³⁸ See the section translated in Kennedy (1994), p. 25.

³⁹ Pringle suggests that the castle comprised 'at least two lines of walls, strengthened by towers,' but is cautious about the possibility of three lines of walls as both Thietmar and Ludolph of Sudheim indicate in their accounts of Shawbak. See Pringle (1993–), II, pp. 304–305.

⁴⁰ Translated in Pringle (2001), p. 678.

⁴¹ Pringle (1993–), II, p. 305, fig. 82.

was only brought to completion by Philip of Nāblus more than two decades later. From 1115 to 1142 Karak was probably occupied by Frankish settlers, local Christians and, perhaps, some Armenians, but little is known about the architecture of the town during this phase.⁴² As yet, no evidence has come to light of pre-Crusader fortifications under the present citadel or around the outskirts of the old town,⁴³ though the representations of the town (identified in the incomplete inscription as [Kha]rakhmob[a], i.e. ‘Kharakh of Moab’) appears in the famous Mādabā mosaic map of the sixth century (pl. 2).⁴⁴ The mosaic in the church of St Stephen in Umm al-Raṣāṣ, now dated to 718 (pl. 3), may indicate that Karak was protected by a perimeter wall in the late Byzantine period and into the first century of Islamic rule in Jordan, though it is worth noting that the generic representations of towns on the pavement of the church of St Stephen lack the topographic specificity found in the Mādabā mosaic.⁴⁵ Later Arabic historical sources also indicate, by the latter part of the tenth century, that some part of the area occupied by the present citadel and the old town was fortified. Referring to events in 983, Ibn al-Dawādārī (d. after 1335) describes Karak as a fortress/citadel (*ḥiṣn*) and notes that the structure dates from the time of someone named Haftikīn (presumably a local governor of Turkish origin).⁴⁶ Less plausibly, Ibn Shaddād (d. 1285) relates a story that Karak contained a monastery which the monks fortified to defend themselves from local bedouin. According to this account, the fortifications were increased by the Franks who also installed a governor and a military force.⁴⁷

The citadel of Karak was substantially remodelled in the Ayyubid and early Mamluk periods, but considerable parts of the original Frankish work remain.⁴⁸ The castle constructed by Pagan the Butler

⁴² Pringle (1993–), I, p. 286.

⁴³ Johns (1997), p. 282.

⁴⁴ Donner (1992), p. 40. The map certainly made use of older cartographic sources dating back to the fourth century, however, and the image of Karak may reflect its appearance prior to the sixth century. See Donner (1992), pp. 21–27.

⁴⁵ The date of the mosaic pavement in the church of St Stephen in Umm al-Raṣāṣ had been read as 785. The revised date of 718 is given in Schick (1995), pp. 472–73.

⁴⁶ Ibn al-Dawādārī (1961–92), VI, p. 206 (the vowelting of this name is uncertain). See also Bianquis (1986–89), I, pp. 141–42.

⁴⁷ Ibn Shaddād (1963), p. 69.

⁴⁸ The best architectural survey of the military architecture of Karak remains Deschamps (1939), pp. 80–98. See also Smail (1956), pp. 218–22; Mumani (1988), pp. 156–242; Kennedy (1994), pp. 45–52; Pringle (1997), p. 59, no. 124 (with extensive bibliography); Pringle (2001), p. 678.

and his successors occupies the southern tip of a larger saddle of land now occupied by the old town of Karak. The east and west walls of the citadel sit atop steep natural slopes that, on the east were improved by the construction of a massive glacis (pls. 7 & 11). To the north the citadel was separated from the town by a ditch that was, according to Ibn al-Athīr, originally about sixty cubits deep (pl. 10). The other area of vulnerability to the south—where the citadel is overlooked by the hill, Umm al-Thalj—was improved by the excavation of another ditch and the addition of a reservoir that functioned as a moat in times of emergency. The site of the original Frankish keep at the south end is now occupied by the massive fortification erected by sultan Baybars (see below) in the thirteenth century. The Crusader citadel was built of roughly shaped stone (in contrast to the drafted masonry of later periods). Surrounded by a curtain wall punctuated by rectangular towers, the citadel was divided on the interior into a lower bailey (barbican) to the west and an upper bailey to the east. The lower bailey is probably the area that the Hospitallers were assigned to defend in 1152 in return for other privileges in Oultrejourdain.

The surviving sections of the Crusader fortifications are to be found on the north side, the east front and the south end of the lower bailey. The north side presents the most complete example of Frankish military architecture on the site (pl. 10). The salient on the east side contains a small, and well defended postern gate. It has been speculated that the main entrance during the Crusader period was situated at the northeastern corner and led through the now ruined tower into the lower bailey. Behind the north side are two storeys of massive barrel vaulted halls that were used for stabling and storage. These areas must have provided refuge from the projectiles that were hurled into the building during sieges. Examination of the east front suggests two phases of construction with the original line of the Frankish citadel being located five to ten metres west of the present curtain wall. The two lines of walls are now separated by vaulted passageways. Some arrow slits from the original curtain wall can still be detected in the present structure; one is to be found in the east wall of the small mosque in the Mamluk-period reception hall (see below). In general, the architecture of the upper bailey is difficult to appreciate due to fragmentary survival above ground and the presence of considerable overburden. Aside from the chapel (see below), it is possible to identify the bakery and a range of other subterranean passageways and vaulted chambers that are likely to date to the Crusader period. In its present form the lower bailey, with

its complex of subterranean vaults, dates mainly to the Mamluk period (pl. 12), though some Frankish work may remain. The south end of the lower bailey was perhaps the original site of the tower of St Mary.

While Karak and Shawbak certainly formed the core of the defences of the lordship of Oultrejourdain, they were not the only fortifications established in the region between 1115 and 1188. Two Frankish writers, Oliver of Paderborn (d. 1227) and Jacques of Vitry (d. *c.* 1240), state that Karak and Shawbak possessed seven very strong forts, though neither source provides a list of their names.⁴⁹ This may be compared with the evidence provided by an account by Ibn al-Athīr (d. 1233) of the castles of the region following the Ayyubid conquest in 1188–89,⁵⁰ a Latin document dating to *c.* 1239 listing the castles of Oultrejourdain,⁵¹ and several charters of the 1160s and 1170s. In addition, archaeologists and travellers in central and southern Jordan have identified the ruins of fortified structures that can be dated to the twelfth century. While some of these ruined structures can be correlated with names found in the written sources, it is worth noting that there continues to be debate concerning some of the identifications. In the absence of Frankish monumental inscriptions on these sites the dating has been established through analysis of the architectural remains and, in some cases, controlled excavations. Most recently, Pringle has suggested that the seven forts should probably be identified as ‘Ammān, Ṭāfila, Khirbat al-Sil‘ā, Khirbat al-Hurmūz, Wu‘ayra, Ḥabīs and ‘Aqaba.⁵² The literary and archaeological evidence is reviewed below.

The most extensively studied of this group of secondary Frankish fortifications is located near to Wādī Mūsa. Known in Arabic as Wu‘ayra, this castle was originally named Li Vaux Moïse. Baldwin I is known to have mounted an attack on a Muslim fort in the vicinity in 1107, but it is unlikely that the king ordered the foundation of a Frankish installation at that time. Wu‘ayra certainly existed in 1144

⁴⁹ Oliver of Paderborn (1894), iv.31 (trans. [1971], pp. 84–86); Pringle (2001), p. 678.

⁵⁰ Ibn al-Athīr (1969) I, p. 734. Other important sources of information on the names of the forts include ‘Imad al-Dīn and Abū Shāma. See notes in Pringle (2001), pp. 680–81.

⁵¹ This document names Montreal, Crac, Vallem de Messa (Wu‘ayra), Traphyla (Ṭāfila), and Celle (as well as a castle in the Ghawr called Marescalcia). See Deschamps (1942–43), pp. 88–89.

⁵² Pringle (2001), p. 678. Other lists of candidates appear in Deschamps (1939), p. 39, n. 1 (though his identification of Qal‘at Ayla as Frankish is incorrect); Brooker and Knauf (1988), pp. 185–88.

(at which point it was taken in a surprise attack by a Muslim army), and a potential construction date suggested on historical grounds is between 1127 and 1131. The fort makes use of the immediate environment in the design of its defences (pl. 26). The single entrance is fashioned out of the natural rock (pl. 27) while the northern sector of the curtain wall is perched above a ravine that was excavated to increase its depth. Constructed of rough-hewn masonry, the rectangular enclosure of *c.* 100 × 35 m contains the remains of a chapel (with architectural details comparable to the smaller chapel at Shawbak), and the traces of what may have been a keep (on the south side) and a residence for the local Frankish noble.⁵³ Excavations on the site have revealed two main phases of occupation during the Crusader period, though the finds did not provide any absolute dating.⁵⁴ The second occupation phase in the Italian excavations included a few examples of imported Syrian stonepaste wares; a surprising discovery that hints at the relative wealth of some of the occupants in the decades prior to 1188–89.⁵⁵

Closely associated with Wu‘ayra is the smaller fort located within Petra that is now known as Ḥabās (pl. 28).⁵⁶ The original name of the site is unknown. The twelfth-century dating has been established on the basis of the masonry, and particularly features such as the arrow slits in the curtain wall of the outer bailey (pl. 29). On a smaller scale than Wu‘ayra, Ḥabās also makes use of the natural terrain to ensure its security with the summit of the hill occupied by a small keep and two lines of walls creating an inner and outer bailey. The very inaccessibility of the site and the barren land it commands have led scholars to question why the fort was built.⁵⁷ One possibility is that it was erected by the Frankish

⁵³ The names of two—Ulric, viscount of Nāblus and his son, Baldwin—are recorded in the charter of 1161. See *Regesta* (1893), no. 366; Pringle (2001), p. 683.

⁵⁴ For archaeological dating of occupation levels at Wu‘ayra see: Brown (1987); and Vannini and Vanni Desideri (1995); Vannini and Tonghini (1997). For further discussion of the architecture, see Marino *et al.* (1990), pp. 5–13; Kennedy (1994), pp. 24–27; Pringle (1993–), II, pp. 373–77, nos. 277–78; Pringle (1997), pp. 105–106, no. 230; Bini and Bertocci (1997).

⁵⁵ Vannini and Vanni Desideri (1995), pp. 529–37, table 1, figs. 16–20; Vannini and Tonghini (1997), pp. 378–83, figs. 13–19.

⁵⁶ The site has been tentatively linked to a castle called Aswit that was visited by Baybars in 1276. See Zayadine (1985), p. 173 (citing Nuwayrī). Cf. comments in Hammond (1970), pp. 32–33.

⁵⁷ The most detailed historical and architectural study is Hammond (1970). See also comments in Marino *et al.* (1990), pp. 4–5; Kennedy (1994), pp. 28–30; Pringle (1997), p. 49, no. 97.

garrison after the fall of Wu‘ayra in 1144,⁵⁸ though other scholars have suggested an association with the ‘new fort’ (*praesidium novum*) that Albert of Aix (d. c. 1120) claims was built by the Franks in a mere eighteen days in 1116.⁵⁹ Whatever the case, the scant finds collected on the site do not indicate an extended period of occupation during the twelfth century.⁶⁰

Less is known about the other five castles that Oliver of Paderborn and Jacques of Vitry claim were to be found in Oultrejourdain. Ahamant/Hamam (i.e. ‘Ammān) appears in charters of 1161 and 1166, but recent surveys have revealed that the fortified tower on the ‘Ammān citadel is likely to be an Ayyubid construction (see below). The location of the Frankish castle is unknown.⁶¹ The list of castles in the document of c. 1239 mentions a structure at Ṭafīla (Traphyla), and a lord Martin of Taphilia appears as a witness to a charter in 1177.⁶² It is generally assumed that this fort was located on the spur of land now occupied by a small Ottoman period tower (pl. 30), though more analysis would be required to establish the phases of construction on this site.⁶³ About 10km south of Ṭafīla in Wādī al-Sil‘a is a natural rock castle known today as Khirbat al-Sil‘a.⁶⁴ While this wādī certainly contains important remains from the Nabatean period, this does not preclude the possibility of reuse in the twelfth century. The similarity between the present Arabic name and the Celle/Sal‘ā found in Latin and Arabic sources is also persuasive. That said, the identification is far from certain, and other scholars have suggested alternative locations for Celle/Sal‘ā (including Ḥabīs).⁶⁵ The original location of Hurmus/Hurmūz has also been the subject of debate, though the best candidate is Khirbat al-Hurmūz

⁵⁸ Kennedy (1994), p. 30.

⁵⁹ Hammond (1970), pp. 34–35; Marino *et al.* (1990), p. 4.

⁶⁰ Hammond (1970), p. 36. Surface finds included Nabatean and Middle Islamic handmade slip-painted pottery.

⁶¹ *Tabulae* (1869), no. 3; *Chartes* (1907), p. 184; Pringle (1997), pp. 112–13, no. P3; Pringle (2001), pp. 679–80.

⁶² *Regesta* (1893), no. 542; Deschamps (1942–43), pp. 88, 90, 96, no. 9.

⁶³ Pringle (1997), p. 98, no. 214; Pringle (2001), p. 680. See also Mumani (1988), pp. 333–34.

⁶⁴ Pringle (1997), p. 95, no. 202; Pringle (2001), p. 680.

⁶⁵ The association with Ḥabīs is based on the fact that in c. 1225 the geographer Yāqūt writes that Sal‘ā is to be found in Wādī Mūsa. See Deschamps (1939), pp. 19, 38–39. See also Brooker and Knauf (1988), p. 187. Their suggestion that Celle is derived from the Arabic *qal‘a* is made unlikely by the fact that later Arabic sources, such as Yāqūt, Ibn al-Athīr and Dimashqī, render the site as Sal‘a.

some 10km north of Petra.⁶⁶ The Red Sea town of Ayla was occupied by Baldwin I in 1116, and the Franks evidently built a fortress in the vicinity. Taken by Ayyubid forces in 1170, the remains of the Frankish fort are believed to be located beneath the present Mamluk structure. Ongoing excavations should help to clarify this question.

Other Frankish secular structures have been identified in central and southern Jordan. Deschamps discusses the reservoirs that were established in the town of Karak including one inside the walls from Burj al-Zāhir that was fed by a canal drawing its water from 'Ayn al-Franj. He also illustrates a Frankish construction over the spring of 'Ayn al-Sitt.⁶⁷ Thought was also given to improving the transport and communications around the kingdom. In order to facilitate the transport of goods and men between Palestine and Oultrejourdain the Crusaders built ports on the east and west sides of the Dead Sea.⁶⁸

The Frankish presence in central and southern Jordan also resulted in the erection of churches in the castles and major towns. The most important of these was the Latin cathedral in Karak. Converted for Muslim use after the surrender of Karak to Ayyubid forces, the arcades and pillars of the Frankish church were still visible until 1929 when the building was destroyed to allow for the construction of the present Congregational Mosque on the site.⁶⁹ The chapel within the inner bailey of the castle consists of a barrel vaulted nave 25m in length and with a sacristy on the north side (pl. 13). In the early nineteenth century parts of the vaults retained frescoes representing saints and, perhaps, a king in armour (possibly a military saint), as well as inscriptions. Nothing of this decoration survives today.⁷⁰ Shawbak castle was provided with two churches during the Crusader period. The first, located in the inner bailey, is a grand three-aisled structure that probably functioned as the parish church (pl. 22). The fragmentary inscription associated with

⁶⁶ Deschamps (1939), p. 38; Pringle (2001), p. 681. Hurmūz may be identified with a site named 'al-Naq'a n' near Petra. See Lindner (1999), pp. 491–94, fig. 24.

⁶⁷ Deschamps (1939), pp. 97–98, pl.x.a.

⁶⁸ For the maritime trade across the Dead Sea, see Idrīsī (1971–84), p. 355. For descriptions of the remains of the port on the eastern side of the Dead Sea, see Musil (1907–1908), I, pp. 170–71; King *et al.* (1987), pp. 439–46.

⁶⁹ Pringle (1993–), I, pp. 287–88, no. 129. See also Deschamps (1939), p. 97, fig. 5.

⁷⁰ Pringle (1993–), I, pp. 288–91, no. 130. For the most detailed description of the decoration of the chapel, see Irby and Mangles (1823), pp. 380–81 (the relevant section is also quoted by Pringle).

the church provides a date of 1118, but this cannot be taken as more than a *terminus post quem* for the present structure. Pringle suggests an identification with the church of St Mary that, according to a charter of 1152, was granted to the Hospitallers.⁷¹ The chapel in the outer bailey is smaller in scale, and may have been designed for the use of the local Syrian Christian community.⁷² The ruined chapel at Wu'ayra is located in the northwest of the area enclosed by the curtain wall and probably dates to *c.* 1127–31. The detailing of the apse exhibits distinct similarities to the chapel in the outer bailey of Shawbak castle, and the two may have been constructed by the same set of masons.⁷³ The tomb of the Patriarchs at St Abraham (Khalil/Hebron) was also a focus of patronage during the Crusader period.⁷⁴

There were also buildings serving the other Christian communities in central and southern Jordan. There was a monastery (Sanctus Aaron) on Jabal Hārūn near Petra occupied by Greek Orthodox monks. This structure predated the Crusader occupation and was still functioning at the time of the visit of the German pilgrim, Thietmar, in 1217. The monastery probably survived through to the fourteenth century when it was replaced by the *maqām* that now stands on the site (see below). Some of the marble and granite details in the present structure may be spolia from the earlier building.⁷⁵ The present Greek church dedicated to St George (built in 1848) in Karak stands on Byzantine remains and was most probably the site of the Orthodox church during the Crusader period. The date of the other Greek church of St George in the town is uncertain, though parts of the building appear to be Medieval.⁷⁶ An inscription found in Karak in 1878 appears to announce the building of a church dedicated to St James in the town by king Hetum in 1257. The reading of the inscription is uncertain, however, and whether this

⁷¹ Pringle (1993–), II, pp. 307–11, no. 229. For the extant churches of Shawbak and Wu'ayra, see also Langendorf and Zimmermann (1964), pp. 134–37, 140–41, figs. 1, 2, pls. II–IV.

⁷² Pringle (1993–), II, pp. 313–14, no. 230.

⁷³ Pringle (1993–), II, pp. 375–76, no. 277. For a discussion of the church of St Moses in Wādī Mūsa, see (1993–), II, pp. 376–77, no. 278.

⁷⁴ Pringle (1993–), I, pp. 223–39.

⁷⁵ Pringle (1993–), I, pp. 251–52, no. 103. The monastery of St Catherine's in the Sinai owned buildings in Karak, and these may have included a hospice for pilgrims (possibly the place where Thietmar stayed during his visit to Karak).

⁷⁶ Pringle (1993–), I, pp. 292–95, nos. 130–31.

church replaced an earlier Armenian church is not known.⁷⁷ There may also have been an Armenian church at Salt.⁷⁸

Ayyubid Period

The castles of Karak and Shawbak surrendered to the forces of Ṣalāḥ al-Dīn in 1188–89 (fig. 4). The military installations and their dependent territories were then given to his brother, al-ʿĀdil, in return for the port of ʿAsqalān.⁷⁹ Through most of the Ayyubid period Karak was administered as part of a larger group of territories although it became an independent principedom during part of the rule of al-Nāṣir Dāwūd,⁸⁰ and later, al-Mughhīth ʿUmar. The great defensive strength of the citadel of Karak made it an obvious location for a treasury, first for al-ʿĀdil, and then through the remainder of the dynasty.⁸¹ Karak was also utilised as a prison,⁸² and as an arsenal.⁸³ These functions would have required the existence of an efficient bureaucratic framework for the collection and storage of agricultural produce from the district.

For the majority of the period between 1188 and 1263 the rule of Karak was in the hands of a local governor appointed by the member of the Ayyubid family who had been allocated the lands of Jordan. The prince, usually based in Damascus, probably kept the town of Karak under his personal jurisdiction. Some of the key castles of the region possessed their own commanders. The names of two such men are recorded in inscriptions from Qalʿat Ayla, while reference to a *mutawallī* of Ayla appears in a document from St Catherine’s monastery in the Sinai.⁸⁴

⁷⁷ Pringle (1993–), I, p. 295, no. 133. Pringle also notes that a colophon in the Armenian Patriarchate Library in Jerusalem records the donation by Leo IV of a Bible to the Armenian church in Karak (dedicated to St George) in 1329.

⁷⁸ Pringle (1993–), II, p. 278, no. 222.

⁷⁹ Bahāʾ al-Dīn (1969), p. 120; Ibn al-Furāt (1971), I, pp. 63, 80; II, pp. 52, 65.

⁸⁰ Ibn al-Dawādārī (1961–92), VII, p. 295.

⁸¹ Maqrīzī (1934–72), I, pp. 182, 332, 352; Ibn al-ʿAmīd (1994), pp. 26, 87.

⁸² Ibn al-Dawādārī (1961–92), VII, pp. 172, 332; Ibn al-ʿAmīd (1994), pp. 61, 68; *History of the Patriarchs* (1974), pp. 56, 230 (English text), pp. 27, 111 (Arabic text); *L’Estoire* (1967), p. 498; Maqrīzī (1934–72), I, p. 289. Al-Mughhīth was imprisoned in Shawbak. See Ibn al-Dawādārī (1961–92), VIII, p. 37. Christian prisoners were kept off the coast of Ayla at Qalʿat Ayla. See Thietmar (1851), p. 43.

⁸³ Maqrīzī (1934–72), I, p. 332.

⁸⁴ Mouton and ʿAbd al-Malik (1995), pp. 76–78, 83–84. The two men are: ʿAlī b. Sakhtkamān in inscriptions dated 583/1187 and 584/1188 and Ḥusām al-Dīn Bākhil

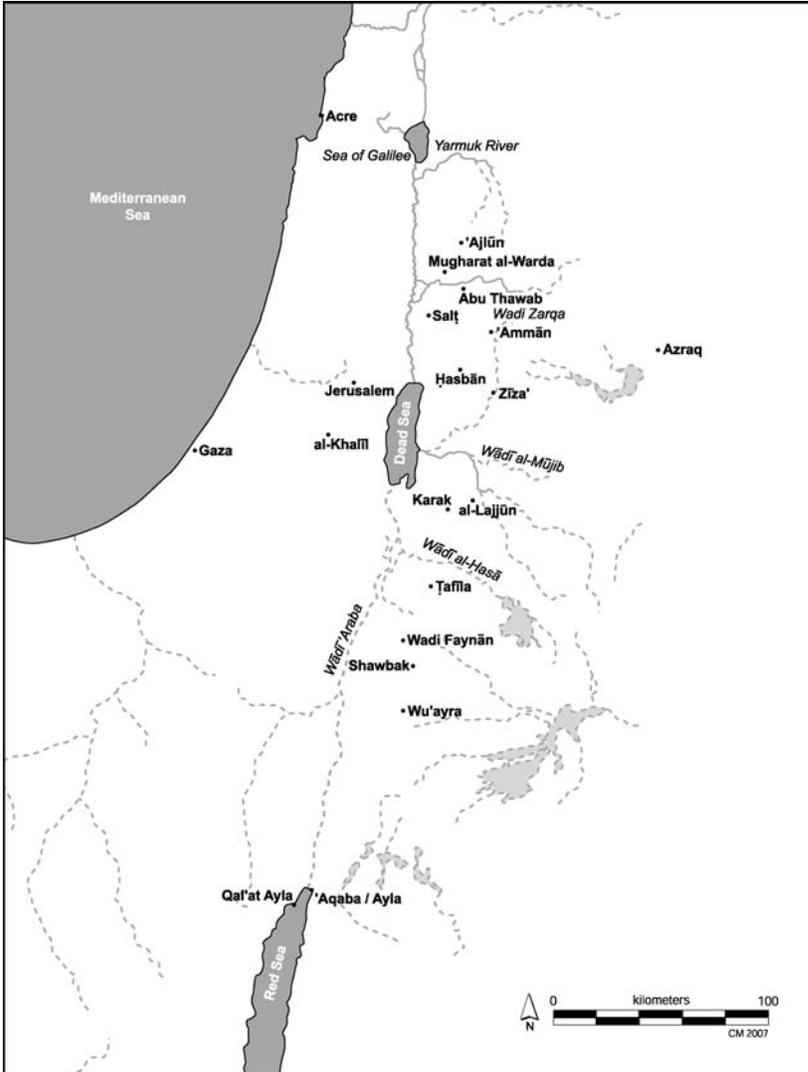


Figure 4. Map of Jordan during the Ayyubid period.

Shawbak also contained a *mutawallī*, and it seems likely that there would have been another located at Salṭ from the time of the construction of the *qal'a*.⁸⁵ The administration of local justice passed from the Crusader *cours* to the *qādī*. The position of *muhtasib* was reinstated. It is likely that the use of the local tribal elder as the *ra'īs* continued as before at a village level although this information does not appear in the sources.

Ibn 'Abd al-Zāhir's (d. 1292) description of the entry of Baybars into Karak in 1263 affords a valuable insight into the administration of the town and region before Mamluk rule, although it should be noted that the administrative arrangements in earlier Ayyubid phases may not have mirrored that of the rule of al-Mughīth 'Umar. The ministries listed in Karak in 1263 are the chancery (*dūwān al-inshā'*), the ministry of the army (*dūwān al-jaysh*), the ministry of finance (*dūwān al-istifā'*), and the ministry of Karak (*dūwān al-karak*). The military presence in the castle consisted of amirs, *al-isfāhsalariyya*,⁸⁶ *al-mufārada*,⁸⁷ soldiers (*jund*), and *al-qarāghulāmiyya*.⁸⁸ Mamluks of the Bahriyya and Zāhiriyya in the castle were removed by sultan Baybars after 1263. The town also contained a judge (*qādī*) and a preacher (*khātib*).⁸⁹

Another area of Ayyubid patronage focused upon the bedouin tribes of Syria. The desire to make safe the route from Syria to the Holy Cities of Mecca and Medina had led Nūr al-Dīn to allocate *iqṭā'*s to tribal chiefs. Ṣalāḥ al-Dīn entrusted the governor of Damascus, Shams al-Dīn b. al-Muqaddam, with the responsibilities of arbitrator (*muḥakkim*) for the tribes and for the payments to them and the collection of 'customary dues' (*al-ʿūdād*) from them.⁹⁰ It was al-ʿĀdil who attempted to institutionalise the relationship between the state and the bedouin

in an inscription with an incomplete date. For the St Catherine's monastery document, see Stern (1965), pp. 25–30.

⁸⁵ Bakhit (1997), p. 373. At the time of the Mongol invasion of Syria in 1260 the castle of Salṭ was under the command of one Badr al-Dīn Muḥammad al-Atabakī. The Mongol army left him in charge of the installation. See Bakhit (1995), p. 999.

⁸⁶ Perhaps derived from the Persian, *siphāsalarīyya* (commander-in-chief of the army).

⁸⁷ Dozy (1881), II, p. 251: Mamluks of the sultan who formed part of the *ḥalqa*.

⁸⁸ Probably meaning the contingent of 'black *ghulam*.' For an alternative reading of 'horsemen,' see Gibb (1962), p. 76, n. 32.

⁸⁹ Ibn 'Abd al-Zāhir (1976), p. 174; Maqrīzī (1934–72), I, pp. 481, 493: the author mentions a *mihmandār* and court ushers (*mubāshiriyya*) at Karak.

⁹⁰ Hiyari (1975), p. 514 (citing ms of al-Iṣfāhanī, *al-Barq al-Shāmī*): the 'customary dues' mentioned in the diploma probably consisted of a tax upon their livestock.

through the creation of the *imārat al-‘arab*.⁹¹ The establishment of an *amīr al-‘arab* was a convenient way of bringing the tribes under the control of central administration; in return for the substantial *iqṭā‘*, the sultan received an oath of loyalty from the holder of the title. The Ayyubid princedoms employed bedouin for surveillance and as cavalry and footsoldiers. It seems likely that bedouin tribesmen were in the pay of al-Mughīth during his resistance against Baybars.⁹²

The standing buildings, monumental inscriptions and historical sources can be used to reconstruct the overall pattern of architectural patronage in the amirate of Karak during the Ayyubid period. In the period between 1188 and 1263, the Ayyubid elite directed their attention toward the construction or reconstruction of military installations, though there is also evidence for the laying out of roads, the building of *khāns*, and the patronage of mosques and other religious structures. Starting with military architecture, the Ayyubids were fortunate to inherit a network of Frankish castles and smaller forts located in strategic positions all over central and southern Jordan. In addition, the Red Sea coast was guarded by the fortress of Qal‘at Ayla located on the island now known as Jazīrat al-Farā‘ūn (also Île de Graye). Constructed by Ṣalāḥ al-Dīn prior to the capture of Oultrejourdain in 1188–89, Qal‘at Ayla formed part of a chain of installations along the southern route through the Sinai to Egypt (*tarīq Ṣadr wa Ayla*).⁹³ This fort was garrisoned with troops during this period.⁹⁴ Recent excavations on the site of the late Mamluk fort of ‘Aqaba (see below) may help to clarify the status during the Ayyubid period of the Frankish fortress believed to have existed at Ayla.

Not all of the Frankish fortresses were actively maintained into the Ayyubid period. Archaeological investigation of the castle of Wu‘ayra (Vaux Moïse) suggests that it was manned by troops for a relatively short period after 1188–89. Importantly, a collapsed curtain wall remained unrepaired and much of the area was taken over for domestic occupation and small-scale industrial activity. The last destruction layer—possibly as the result of an earthquake in 1201–1202—marked the end of

⁹¹ ‘Umārī (1985b), p. 117. And see Hiyari (1975), pp. 512, 514, n. 32.

⁹² Ibn ‘Abd al-Zāhir (1976), pp. 164–65

⁹³ Mouton and ‘Abd al-Malik (1995); Mouton *et al.* (1996).

⁹⁴ Qāḍī al-Fāḍil quoted in Ibn al-Wāṣil (1953–77), II, p. 489. The account describes the castle as being located in the harbour (*thaghr*) of Ayla. See also Mouton and ‘Abd al-Malik (1995), p. 81, n. 11.

permanent occupation.⁹⁵ The nearby fortress of Ḥabās, located within Petra, may well have ceased to function prior to 1188–89, and the survey conducted of the site found no evidence of military activity in the post-Crusader period.⁹⁶ Likewise, there is little to indicate that the southern Frankish outposts known in the sources as Celle and Hurmus continued to function in any military capacity after the expulsion of the Franks from central and southern Jordan. Moving further north, the watchtower at Ṭafila may have continued in operation though, in the absence of surviving monumental inscriptions or mentions in the historical sources, little can be said about the use and maintenance of the site in the Ayyubid period.⁹⁷

Karak, as the most important military and administrative site in central and southern Jordan, was a focus for Ayyubid patronage. While the Frankish construction phases in the castle are relatively well understood, the absence of detailed modern survey of the site makes it difficult to assess the contribution made by the Ayyubids.⁹⁸ At present, the best sources of evidence are the surviving monumental inscriptions and the brief references to construction found in Arabic chronicles. The castle and other defences of Karak must have suffered significant damage following the sieges of the 1170s and 1180s. Ṣalāḥ al-Dīn's bombardment of the castle necessitated the erection of a new keep at the southern end of the inner bailey (pl. 9).⁹⁹ Historical sources note that al-ʿĀdil undertook building work in the castle in 1192,¹⁰⁰ and it seems likely that the southern keep formed part of this project as such a structure would have been essential to the defensive integrity of the citadel. An amir named Ṣarīm al-Dīn Barghash al-ʿĀdilī appears on two inscriptions dating to 594/1197 that are now attached to the outer wall of the Congregational Mosque in Karak.¹⁰¹ Unfortunately, the inscriptions do not make clear what work was undertaken. Al-Muʿazzam ʿĪsā commissioned the excavation of a fortified tunnel into Karak in

⁹⁵ Brown (1987), pp. 269–77; Vannini and Vanni Desideri (1995), pp. 524–27; Vannini and Tonghini (1997), pp. 375–78.

⁹⁶ Hammond (1970), pp. 35–36.

⁹⁷ Ṭafila does appear in a Latin document dated 1239 that lists the castles of Oultrejourdain. This text does not prove that this site was still in operation under the Ayyubids, however. See Deschamps (1942–43), pp. 88, 90, 96, no. 9.

⁹⁸ Cf. Recent work on Islamic military architecture at Shayzar in central Syria. See Tonghini *et al.* (2003).

⁹⁹ Pringle (2001), p. 678.

¹⁰⁰ Bahā' al-Dīn (1969), p. 358; Ibn al-Athīr (1969), II, pp. 73, 76.

¹⁰¹ Pringle (1993–), I, p. 287 no. 129; *RCEA*, X (1931–), no. 3800A.

624/1227,¹⁰² and there are also records that he reconstructed towers in the citadel following an earthquake in 1211.¹⁰³ Improvements to the fortifications of Karak were also made by al-Nāṣir Dāwūd in 1244–45, though the account given by the historian, al-ʿAynī (d. 1451) provide no further details.¹⁰⁴ The last Ayyubid amir of Karak, al-Mughhīth ʿUmar, evidently also commissioned some construction work during his tenure. An inscription dated 651/1253 records the erection of an unnamed building (possibly a religious structure rather than something with a military function) in Karak by Jamal al-Dīn Naṭr, known by the title of ‘the lofty council’ (*al-majlis al-sāmī*).¹⁰⁵

The extent of Ayyubid architectural patronage at Shawbak is also difficult to establish with certainty, though there is certainly historical evidence for investment in the region, particularly by al-Muʿazzam ʿĪsā.¹⁰⁶ That amir’s interest in the creation of gardens and orchards in Shawbak may help to date the architectural remains in Wādī al-Bustān, east of the castle.¹⁰⁷ It has been suggested that this area contained a mill, possibly for the processing of sugar cane, as well as channels for the diversion of water from the spring.¹⁰⁸ Further research would be required to test these speculations. Excavations inside the castle by Robin Brown revealed a four-*iwān* complex (pl. 24) of a type that can be compared to similar Zengid and Ayyubid palatial structures in Syria. Excavation of the four-*iwān* complex helps fix the date of the initial construction and use in the Ayyubid period, and Brown argues plausibly that al-Muʿazzam ʿĪsā was likely the amir who commissioned this palatial area. The complex continued in use through the early

¹⁰² *RCEA*, x (1931–), no. 3965.

¹⁰³ Brown (1989), p. 290.

¹⁰⁴ ʿAynī (1969), p. 198.

¹⁰⁵ ʿAmr (1989). The name of the amir has been erased from the description, but the date makes clear that it must be al-Mughhīth ʿUmar. The same ruler also made repairs in the city following an earthquake in 1261. See Brown (1989), p. 290. In the Mamluk period the title, *al-majlis al-sāmī*, refers to those who attained the rank of *amīr ṭablahāna* without having been a *khāṣṣakī* or holding a specific function. See Bauden (2004), p. 71.

¹⁰⁶ For the complete and fragmentary Ayyubid inscriptions from Shawbak, see Mumani (1988), pp. 281–84.

¹⁰⁷ Ibn Shaddād (1963), p. 80. Further discussion of the agriculture of Shawbak, and evidence of Ayyubid patronage, may be found in chapter 4.

¹⁰⁸ See discussion in Brooker and Knauf (1988), p. 185.

Mamluk period, and was extensively remodelled following a structural collapse (possibly caused by an earthquake).¹⁰⁹

In the northern regions of the amirate of Karak there is evidence for both construction and renovation during the Ayyubid period. The most impressive installation of this period was that located on the hill of Ra's al-Amīr (now known Jabal al-Qal'a) above the town of Salt. Al-'Umarī (d. 1347) records that this, and the *qal'a* of Azraq, were ordered by al-Mu'azzam 'Īsā, and other evidence places the construction at Salt to 617/1220.¹¹⁰ The castle continued in use through the Mamluk and Ottoman periods. Other restoration work was required when it was garrisoned with Mamluk and Ottoman troops in later centuries. Unfortunately, the demolition ordered by Ibrāhīm Pasha sometime between 1831 and 1840, and the subsequent occupation of the area by a mosque (on the summit of the hill) and houses mean that very little survives of the Ayyubid-Ottoman castle. The plan of the structure has never been mapped out, but early photographs and written descriptions indicate that the upper part of the hill was ringed with fosses and substantial stone walls punctuated by towers.¹¹¹ One section of rusticated masonry, possibly of Ayyubid date, may be seen beneath the plateau on the summit of the hill (pl. 32). Interestingly, the erection of this major fortification does not seem to have been motivated primarily by a consideration of the threat posed to western Balqā' by the Crusader forces on the coastal strip, but rather by an attack mounted by local bedouin on a caravan passing through the region.¹¹²

Ayyubid work at Azraq took the form of the substantial renovation of an existing late Roman structure, possibly dating to the rule of emperor Diocletian (r. 284–305). Above the main gate of the basalt fortress is an inscription providing the date of 634/1237 and the name of 'Izz al-Dīn Aybak, former *ustādh-dār* of al-Mu'azzam 'Īsā, as the one responsible for the work.¹¹³ Al-'Umarī's account cited above indicates

¹⁰⁹ Brown (1988).

¹¹⁰ 'Umarī (1985a), p. 120. For the dating of the castle at Salt, see Bakhit (1995), p. 999.

¹¹¹ For comments on the architecture of the Islamic castle, see Mumani (1988), pp. 318–26; Walmsley (2001), p. 530. For a list of the older sources dealing with the antiquities of Salt, see Bakhit (1995), p. 1000. A photographic panorama of the town was taken by Henry Phillips in 1867. Some details of the ruins of the castle can be made out. Illustrated in Rogan (1999), pl. 2.1.

¹¹² Bakhit (1995), p. 999.

¹¹³ *RCEA*, XI (1931–), no. 4111.

that the reconstruction of Azraq started earlier during the rule of al-Mu‘azzam ‘Īsā. Surveys of the site have indicated that, in the early thirteenth century, the ancient *castrum* was substantially altered through the reconstruction of the defensive towers, outer walls and the inner chambers. A small mosque was also built in the courtyard.¹¹⁴

Not all Ayyubid military architecture between the Wādī al-Mūjīb and the Wādī Zarqā’ was built on the scale of the castles of Salṭ and Azraq, however. Recent analysis of a square tower, measuring eight metres per side and constructed of large dressed blocks and reused marble columns, on the citadel of ‘Ammān has provided an early thirteenth-century dating (pl. 31).¹¹⁵ While ‘Ahamant’ is mentioned among the castle of Oultrejourdain in Latin sources (see above), no trace of Frankish construction has been located at the citadel itself. The contrast between the impressive fortress at Salṭ and the diminutive tower at ‘Ammān suggests that, after 1188, the former was elevated to the status of the principal military installation in Balqā’. The tower at ‘Ammān would, however, have been better positioned to observe the traffic along the King’s Highway.

The protection and surveillance of the main arteries of trade and communication appears to be a theme in the architectural patronage of the Ayyubid in central and southern Jordan. As already noted, the castle at Salṭ was built following a raid on a trade caravan, while the tower at ‘Ammān and the fortress at Azraq could both have guarded trade routes (the latter running east through the desert to southern Iraq). In addition, the Ayyubid elite was also responsible for maintaining the security of Muslim pilgrims passing through the region on the way to the Holy Cities of the Ḥijāz. With this goal in mind, al-Mu‘azzam ‘Īsā ordered the improvement of *ḥajj* road running south from Damascus. It would appear that only the section between the southern towns of Mu’ta and Ma‘ān was completed by the sultan.¹¹⁶ Al-Mu‘azzam ‘Īsā is known, however, to have built a *khān* at ‘Aqaba in 610/1213. The inscription from this lost building states that the work was undertaken by the *ustādh-dār* Abū Maṣṣūr Aybak under the administration of Shujā‘ al-Dīn ‘Abd al-Raḥman b. ‘Abd Allāh.¹¹⁷

¹¹⁴ On the Islamic architecture of Azraq castle, see Mumani (1988), pp. 327–32.

¹¹⁵ Wood (1993), p. 13; Ostrasz (1997).

¹¹⁶ Ibn al-Jawzī (1907), p. 429.

¹¹⁷ *RCEA*, x (1931–), no. 3720.

There is less extensive evidence for the patronage of religious architecture in central and southern Jordan during the Ayyubid period. It is known that the site of the cathedral at Karak was taken over for use as a mosque after the capture of the town, and it seems likely that the Latin chapels inside the castles and other military installations of Oultrejourdain were converted for Muslim use. In other places mosques may have been founded or renovated; for instance, al-Mu‘azzam ‘Īsā is credited with the endowment of a mosque in Ḥasbān in 1208.¹¹⁸ Curiously, the surviving epigraphic evidence does not point to any Ayyubid patronage of important places of local pilgrimage (*ziyāra*) such as the shrine of Ja‘far b. Abī Ṭālib and the other martyrs of the battle of Mu‘ta in 629 or the cave of the seven sleepers at Raqīm in Balqā’. The pilgrimage guide written by ‘Alī al-Harawī (d. 1217) does indicate, however, that these, and other, localities in central and southern Jordan were attracting pilgrims in the late twelfth and early thirteenth centuries.¹¹⁹ Building work and the establishment of *waqfs* at Khalīl are also recorded during the Ayyubid period.¹²⁰ One extant inscription found on the door of a shrine east of Shawbak (dated 646/1248 during the reign of al-Ṣāliḥ Ayyūb) records the construction of a building by Sharaf al-Dīn ‘Īsā b. Khalīl b. Muqātil.¹²¹ This inscription may be associated with a small shrine located near to Shawbak (pl. 25). Now associated with the local saint, Abū Sulaymān al-Dīrānī, the form of the dome and the decoration of the squinches are consistent with a date in the Ayyubid period.¹²² One other minor event may be recorded in the context of religious patronage: the body of one of al-‘Ādil’s sons, al-Malik al-Amjād Majd al-Dīn Ḥasan, was exhumed from its burial place in Jerusalem and moved to Karak.¹²³

¹¹⁸ Walker (2003), p. 250, n. 47 (citing al-‘Asqalānī, *Inbā’ al-ghumr bi anbā’ al-‘umr*).

¹¹⁹ Harawī (1953), pp. 18–19. Trans. Harawī (1957), pp. 47–48. For a general discussion of *ziyāra* in Bilād al-Shām, see Meri (2001).

¹²⁰ For instance, see *RCEA*, x (1931–), no. 3752.

¹²¹ *RCEA*, xi (1931–), no. 4278.

¹²² The building is discussed briefly in Walmsley (2001), p. 536, fig. 15.11. Citing other studies, the author suggests a date in the Mamluk period.

¹²³ Maqrīzī (1934–72), I, p. 191.

Mamluk Period

The amir ‘Izz al-Dīn Aydamur, one of Baybars’ mamluks, was made the governor of Karak and its dependencies in 1263 (fig. 5). In addition to his other duties, he was responsible for provisioning pilgrims at the tomb of the Patriarchs in Khalīl.¹²⁴ Baybars bestowed upon the new governor the sum of 30,000 *dirhams* and some textiles, the latter perhaps as a form of supplementary salary.¹²⁵ In 1265 the same governor was allocated an *iqṭāʿ* in the district of Arsūf.¹²⁶ The castles of Karak and Shawbak remained under the direct control of the state but land in the region was given as *iqṭāʿ*.¹²⁷ Baybars ordered some construction work to be carried out on the castle, and had 70,000 *dīnārs*, 50,000 *dirhams*, flocks of animals, barley, and textiles deposited there.¹²⁸ Karak was used as a treasury,¹²⁹ arsenal,¹³⁰ storehouse,¹³¹ and prison¹³² for much of the Mamluk period.

From 1263 Karak-Shawbak was incorporated into the governmental structure of the Mamluk empire. The territories of Syria were organised into a series of administrative units (s. *mamlaka*) each headed by a *nāʾib*. There is disagreement among the sources of the Mamluk period as to the actual number of *mamlakas* in Syria but there are six which appear in all the accounts: Damascus, Aleppo, Ḥamāʾ, Tripoli, Ṣafad, and Karak. The governorship of Karak consisted of the *niyāba* of Karak and three *wilāyas* (Maʿān, Zughar and Shawbak). *Wālīs* were appointed from the ranks of amirs or the *jund al-ḥalqa* to each of the *wilāyas*.¹³³ Balqāʾ was

¹²⁴ Ibn ‘Abd al-Zāhir (1976), p. 221.

¹²⁵ Ibn ‘Abd al-Zāhir (1976), p. 165.

¹²⁶ Ibn al-Furāt (1971), I, p. 104; II, p. 82; Maqrīzī (1934–72), I, p. 534.

¹²⁷ Abū al-Fidāʾ, *Autobiographie* (1969), p. 173: he records that Sayf al-Dīn Kabjak holding Shawbak as an *iqṭāʿ* in 1303. Al-‘Azīz, son of al-Mughīth, was given Dhibān as *iqṭāʿ* by Baybars in 1261. See Ibn ‘Abd al-Zāhir (1976), p. 123.

¹²⁸ Ibn ‘Abd al-Zāhir (1976), p. 165.

¹²⁹ Dimashqī (1866), p. 213; Abū al-Fidāʾ, *Autobiographie* (1969), p. 183; Ibn Abī al-Faḍāʾil (1916–20), II, p. 470; Burchard of Mount Sion (1896), p. 58. Poloner in Tobler (1974), p. 256. Poloner remarks, ‘Super hanc Petram aedificatum est inexpugnabile castrum quondam Pirach [Kirack], in quo Soldanus suos deponit thesauros Arabiae et Aegypti’.

¹³⁰ Ibn Abī al-Faḍāʾil (1916–20), II, pp. 470, 542; Ibn al-Furāt (1971), I, p. 104; II, p. 82.

¹³¹ Maqrīzī (1934–72), I, p. 732; Ibn Abī al-Faḍāʾil (1916–20), II, p. 470; Maqrīzī (1957), p. 34.

¹³² Abū al-Fidāʾ (1983), p. 56; Ibn Ṣaṣrā (1963), I, pp. 29–30; II, p. 17; Ibn Taghrībirdī (1909–36), VII, p. 186.

¹³³ Gaudefroy-Demombynes (1923), p. 237 (citing an anonymous manuscript dated 1439 and entitled ‘*muqṣid*,’ fol. 153v, Bibliothèque Nationale ms Arab 4439).

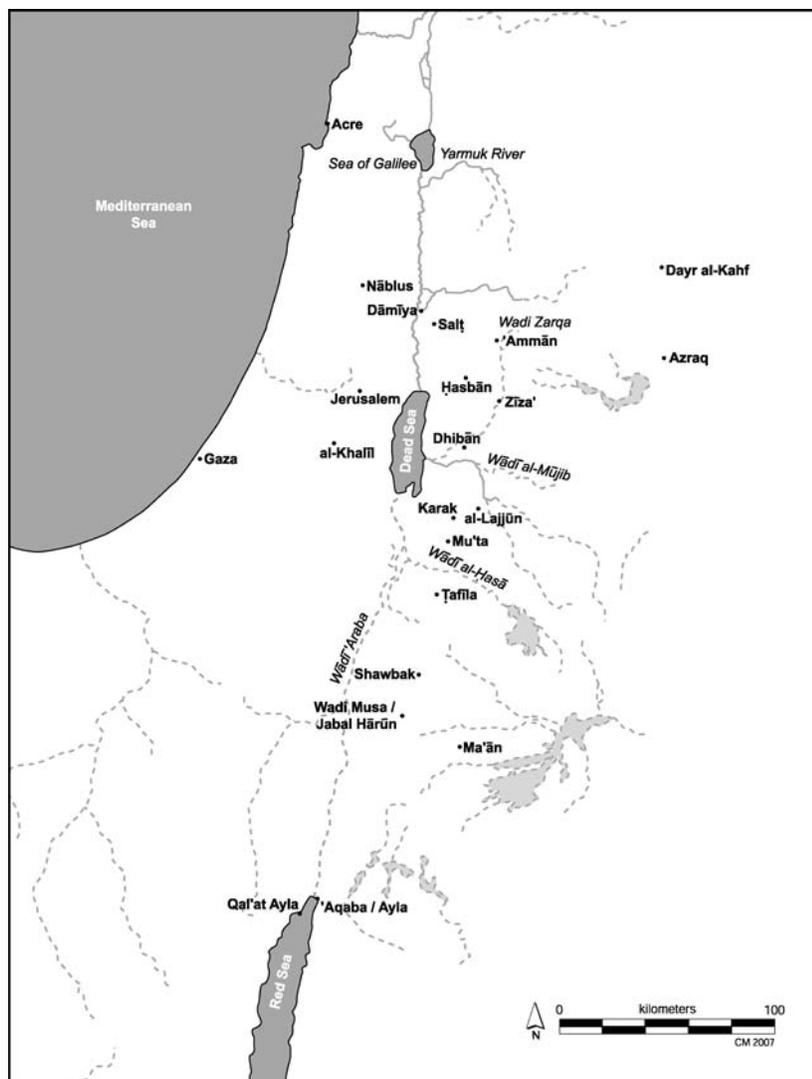


Figure 5. Map of Jordan during the Mamluk period.

a *wilāya* within the governorship of Karak at some points during the Mamluk period, even being elevated briefly to the status of a *niyāba* during the revolt led by Khidr, son of Baybars in Karak in 1288. The administrative capital of Balqā' changed through the course of the fourteenth century with Salṭ, 'Ammān and Ḥasbān all performing this role at different times.¹³⁴

The land administered by the governor in Karak varied in the Mamluk period. The period from 1263 to the end of the thirteenth century saw the town controlling most of Jordan and the region around Khalīl. The east side of the Jordan valley was also administered by the *mamlaka* of Karak, but with some of the sugar mills and other property in the region were owned by the sultan and were under the direct authority of a royal office (headed by a *nāẓir al-khāṣṣ*) in Damascus.¹³⁵ Writing in c. 1300 the geographer Dimashqī (d. 1327) lists the towns of the *mamlaka* of Karak. Khalīl is no longer included, but the town of Zughar and the Crusader fort of Sal'a (located either south of Ṭāfila or in the hills above the Dead Sea) are mentioned. He also notes lands north to the Wādī Zarqā' extending from Salṭ in the west and Azraq in the east, the land of Qulzum (the coast of the Red Sea), and Ma'an in the southeast.¹³⁶ It is possible, however, that some of his information is anachronistic; for instance, it seems unlikely that Sal'a was still operational at the end

¹³⁴ Walker (2003), pp. 242–45.

¹³⁵ Qalqashandī (1913–18), iv, pp. 183, 190: sugar cane was sent to be processed at the *maṭābikh al-sukkar al-sultāniyya*. Mamluk sultans also allocated villages in the Jordan valley to the *waqfs* established for religious foundations in Cairo. Presumably, some of these villages were especially valuable because they were associated with sugar cultivation. See comments in Walker (2003), p. 244.

¹³⁶ Dimashqī (1866), p. 213. There had been changes in the allocation of lands in Jordan between 1263 and 1300 that do not appear in his description. Treaties drawn up between the Mamluk sultans Baybars and Qalāwūn and Christian rulers provide indications concerning the changing status of Balqā' and Khalīl. A treaty of 667/1269 mentions only 'the provinces of al-Karak and al-Shawbak and what pertains thereto of castles, territories and civilians'. A later treaty of 682/1283 mentions 'the province of al-Karak and al-Shawbak and its districts', but also 'al-Salṭ and its districts', and 'the province and territories of Hebron'. A third treaty of 684/1285 splits the lands east of the Jordan valley still further with separate mentions of 'the province of Karak', 'the province of Shawbak', 'the province of al-Salṭ and al-Balqā'', and 'the province of 'Ajlūn'. Quite what these changes in the descriptions of the territories of Jordan meant in relation to the actual administrative structure is, however, not apparent. See Holt (1995), pp. 44–47, 73–87, 95–103.

of the thirteenth century. By the 1340s Balqā' had become part of the *niyāba* of Damascus (this administrative transition may have occurred before this time).¹³⁷ No descriptions of the territories of Karak are available for the latter part of the fourteenth and the fifteenth centuries. In 1509 Janbirdī al-Ghazālī is described as governor of Jerusalem and Karak, perhaps suggesting that the region south of the Wādī al-Mūjib was no longer controlled directly by Karak.¹³⁸

Qalqashandī (d. 1418) ranks Karak with Gaza as least important of the seven *mamlakas* of Syria. He states that administrative positions in Gaza and Karak were considered of lower status to equivalent positions in the other five major regions.¹³⁹ Khalīl al-Zāhirī (d. 1468) insists, however, on a higher status for the region. He points to the fact that the *nā'ib* was allowed the privilege of carrying out his correspondence on red paper (a privilege that probably remained from the time of the Ayyubid confederacy). In the remainder of Syria, only the governor of Damascus was also accorded this honour. According to him the post of *nā'ib* of Karak could only be held by a commander of the army (*atābak al-'asākir*) or one of analogous rank.¹⁴⁰ An indication of the more complete titulature accorded to the governor of Karak is provided by a brass tray and copper stand made for Jamāl al-Dīn Āqūsh b. 'Abd Allāh al-Ashrafi while he was *nā'ib al-saltāna* of Karak (1291–1309). Ornamented with his blazon—a shield containing a falcon-like bird looking to the right—the tray describes him as 'His high excellency, the learned, the just, the defender of the faith, warrior of the frontiers, warden of the marches, the victorious, Jamāl al-Dīn Āqūsh, governor of Karak, the protected (*al-muqarr al-'ālī 'l-'ālimī 'l-'ādilī 'l-mujāhidī 'l-mirābaṭī 'l-muthāghirī 'l-manṣūrī 'l-jamālī Jamāl al-Dīn Āqūsh nā'ib al-saltāna bi'l-Karak al-mahrūs*).'¹⁴¹

Karak appears, however, to have employed fewer staff than the major *mamlakas* of Syria.¹⁴² There is some information concerning

¹³⁷ Umarī (1988), p. 237. See also Ibn al-Wardī (1766), p. 171.

¹³⁸ Ibn Tūlūn (1962–64), I, p. 333; Bakhit (1982), p. 19, n. 1. This same dual post may have existed as early as 883/1478. See Ibn Iyās (1960–74), III, p. 144.

¹³⁹ Qalqashandī (1913–18), XII, pp. 299, 484.

¹⁴⁰ Qalqashandī (1913–18), VI, p. 193; VIII, p. 54; Khalīl al-Zāhirī (1894), p. 132: the practice seems to derive from the breakup of Syria and Egypt by Ṣalāḥ al-Dīn. The princes of the confederacy wrote to one another on red paper. On these ranks, see Ayalon (1977), III, pp. 57–59.

¹⁴¹ Translation and historical commentary in Mayer (1933), pp. 71–72. The shorter inscription on the tray gives a further elaboration: *nā'ib al-saltāna al-mu'azzamī*.

¹⁴² Ziadeh (1953), p. 20 (tables based on figures in Qalqashandī, *Ṣubḥ*).

the actual military and administrative elite working under the *nāʾib al-saltāna* in Karak. The other amirs at Karak comprised two *hājibs*,¹⁴³ the commander of the *barīd*, the *mihmandār*,¹⁴⁴ and the *nāʾib al-qalʿa* or *wāṭī al-qalʿa* (the only official not directly answerable to the *nāʾib al-saltāna*).¹⁴⁵ Khalīl al-Zāhirī mentions a number of ‘amirs of twenty’ (their duties are not specified), some members of the free-born army (*jund al-ḥalqa*), Bahriyya,¹⁴⁶ servants of the sultan (s. *ghulām al-saltaniyya*) and captains of the guard (s. *ṣāhib al-naʿaba*) in Karak. Other bureaucrats employed in the town cited by Khalīl al-Zāhirī are *qāḍī al-quḍaʿ*, *qāḍī al-ʿasākīr*, *kātib al-sirr*,¹⁴⁷ *nāẓir al-jaysh*, *naqīb al-jaysh*, *mutawallī*, and a *muhtasib*.¹⁴⁸ Qalqashandī also adds deputies to the treasury (s. *wakīl bayt al-māl*), secretaries to the chancery (s. *kātib al-dast*), and an inspector of household departments (*nāẓir al-buyūt*).¹⁴⁹

Khalīl al-Zāhirī mentions an *amīr al-ʿurbān* in the *mamlaka* of Karak. This title was conferred on the paramount chief of the local tribes.¹⁵⁰ An important area of Mamluk state expenditure in the region was the allocation of *iqṭāʿ*s to both tribes and to villages for keeping safe stretches of road.¹⁵¹ In 1263 Baybars made out *iqṭāʿ*s to the Banū ʿUqba and the Banū Mahdī and ordered them to guard the provinces of Karak-Shawbak and the Hījāz.¹⁵² At other times gifts of sugar, oil, and spices had to be offered to bedouin to ensure the safe passage of the *ḥajj* through the southern part of Jordan.¹⁵³ Other tribes were given the duty of surveillance of the routes near the frontier with Iraq.¹⁵⁴ The chiefs

¹⁴³ Khalīl al-Zāhirī (1894), p. 132. See also Ayalon (1977), III, p. 60.

¹⁴⁴ Gaudefroy-Demombynes (1923), p. 237: the posts of *mihmandār* and commander of the *barīd* are not mentioned by Khalīl al-Zāhirī. The job of the *mihmandār* was to organise the meeting between the governor and the bedouin. See EI2, VII, p. 462; Qalqashandī (1913–18), IV, p. 187.

¹⁴⁵ Qalqashandī (1913–18), VII, p. 180; XII, p. 225.

¹⁴⁶ Khalīl al-Zāhirī (1894), p. 132; Shujāʿī (1977), p. 275. Sultan Qalāwūn set up a regiment of *awḥād al-nās* which served in Karak and other *qalʿas* in Syria. This regiment was also called ‘Bahriyya’ although it was not composed of mamluks. See Ayalon (1996), p. 50; Poliak (1977), p. 2.

¹⁴⁷ Probably the same as the *kātib al-darj*. See Qalqashandī (1913–18) IX, p. 259. Also see *kātib al-sirr* in Maqrīzī (1837–45), II, *Appendices*, pp. 317–21.

¹⁴⁸ Khalīl al-Zāhirī (1894), p. 132. For the role of the *mutawallī*, see ʿUmarī (1988), p. 237. On the *naqīb al-jaysh* and the *nāẓir al-jaysh*, see Ayalon (1977), III, pp. 64–67.

¹⁴⁹ Qalqashandī (1913–18), XI, p. 118.

¹⁵⁰ Zāhirī (1894), pp. 132–33.

¹⁵¹ Ibn Khaldūn (1868), V, p. 383; de Mignanelli (1959), pp. 153, 163.

¹⁵² Ibn ʿAbd al-Zāhir (1976), p. 165; Maqrīzī (1934–72), I, p. 492.

¹⁵³ Maqrīzī (1934–72), I, p. 782.

¹⁵⁴ Maqrīzī (1934–72), I, pp. 464–65.

of tribes were also given the status of ‘people of the sword’ (pl. *arbāb al-suyūf*) and the title of amir in diplomas (s. *marsūm*) signed by the sultan.¹⁵⁵ In addition to maintaining routes through the kingdom and intelligence gathering, the tribes lent extra forces for the army. The Banū Mahdī and Banū ‘Uqba of Jordan could mobilise an estimated 1,000 men.¹⁵⁶ The Arab tribes of Egypt and Syria also provided the state with vital supplies of horses, sheep and camels without which the Mamluk army could not have functioned. Despite the extensive patronage of the bedouin by sultan al-Nāṣir Muḥammad, the Karak region did not enjoy complete internal security. Abū al-Fidā’ (d. 1331) records that the Banū Lām attacked a caravan returning from Mecca and Medina in 1314.¹⁵⁷

Another piece of evidence concerning state patronage of local bedouin groups in the Karak region has recently come to light in a notebook written by the historian al-Maqrīzī. Significantly, the notebook was made from reused sheets that have been identified as chancery documents written in Cairo and referring to events of the 1340s. These fragmentary documents have been reconstructed and analysed by Frédéric Bauden.¹⁵⁸ The documents comprise a set of *manshūrs* (i.e. decrees granting *iqṭā’*s) issued by the chancery of sultan Ismā‘īl to Bāligh b. Yūsuf b. Ṭayyī’ following his betrayal of his former master, sultan al-Nāṣir Aḥmad in 1344. Bāligh, who is accorded the title of *al-majlis al-sāmī* in the documents (as noted above, this same epithet is also used by Jamal al-Dīn Naṭṭ, a deputy of al-Mughhīth ‘Umar in an inscription dated to 651/1253), was *muqaddam* of the Arab and Jabaliyya troops in Karak.¹⁵⁹ The *ism* of Ṭayyī’ indicates his membership of the Rabī’a tribe.¹⁶⁰ A person of some influence, al-Maqrīzī asserts that Bāligh was ‘[Aḥmad’s] most important confidant among the people of al-Karak’.¹⁶¹ The documents allude to Bāligh’s secret departure to Cairo and his central role in handing over Karak and sultan Aḥmad as well as indicating the gratitude of the state for his services (For instance, document II, lines 8–9 states, ‘Those who abandon their homes and

¹⁵⁵ *ET2*, vii, pp. 462–63.

¹⁵⁶ Khalīl al-Zāhiri (1894), pp. 105–106: in addition, every village was obliged to muster two horsemen (providing a total for the sultanate of 66,000 horsemen).

¹⁵⁷ Abū al-Fidā’, *Autobiographie* (1969), p. 179.

¹⁵⁸ Bauden (2004). My thanks to Professor Bauden for sending me a copy of this article.

¹⁵⁹ Bauden (2004), p. 68 (quoting a passage from al-Shujā’ī’s *al-Tārīkh*). His full title was probably *muqaddam al-halqa*. On this post, see Ayalon (1977), ii, pp. 450–51.

¹⁶⁰ Bauden (2004), p. 70, n. 34.

¹⁶¹ Maqrīzī (1934–72), ii, p. 661. Translation given in Bauden (2004), p. 68.

their children for the sake of our noble portals with patient endurance, those will be rewarded'.) Though the available sources do not provide explicit information on the issue, Bauden concludes that Bāligh was given the title of *amīr ṭablkhāna* and *iqṭā's* with an annual revenue in the region of 450,000 *dirhams*.¹⁶² Unfortunately, the extant sections of the *manshūrs* do not give details of the locations of the *iqṭā's* themselves.

The Mamluk period witnessed extensive investment in Karak and the rest of Jordan. Ibn 'Abd al-Zāhir writes that Baybars paid special attention to the surrounding lands of Karak and set aside funds for expenditure on it.¹⁶³ Baybars al-Manṣūrī (d. 1325) states that sultan Qalāwūn arranged the status of the local tribes and allocated *iqṭā's*.¹⁶⁴ In a later passage Baybars al-Manṣūrī describes with evident pride the revival of the agriculture of the region during his period in office as *nā'ib al-salṭana* of Karak.¹⁶⁵ Both the region around Karak and the local tribes were the beneficiaries of the presence of al-Nāṣir Aḥmad in Karak (though this dispersal of funds as a means to gain support probably did not amount a coherent policy of investment in the agricultural or transport infrastructure). The young sultan moved the entire contents of the state treasury in Cairo to the castle in 1341. According to Mamluk sources, when the castle was stormed in 1344 the victors found no trace of the vast quantities of gold, silver and treasure that had been amassed there a few years before.¹⁶⁶ State patronage could be in the form of exemptions from taxation. An inscription discovered in the town of Karak records just such an act on behalf of Sultan Barqūq in 792/1390. The inscription proclaims an exemption, in perpetuity, for the inhabitants of Karak of all taxes on houses, estates, *waqfs* and gardens.¹⁶⁷

¹⁶² Bauden (2004), pp. 70–72. See also Ayalon (1977), II, 469–70.

¹⁶³ Ibn 'Abd al-Zāhir (1976), p. 164. The same author mentions that special funds (*khāṣṣ al-qal'a*) were set aside for Shawbak 'as it was in the times of al-Ṣālihiyya' (p. 121).

¹⁶⁴ Baybars al-Manṣūrī (1998), p. 255; Maqrīzī ([1934–72], I, p. 732) mentions that the sultan authorised the cleaning of cisterns in Karak.

¹⁶⁵ Baybars al-Manṣūrī (1998), p. 257. The author is determined to draw a contrast between the disorder and unproductivity of the land as it was left by his predecessor. The somewhat melodramatic account of the revival of the region under his governorship should perhaps be treated with caution.

¹⁶⁶ Shujā'ī (1977), p. 269; Maqrīzī (1934–72), II, p. 661.

¹⁶⁷ Duc de Luynes (1871–76), II, p. 201, no. 19; *RCEA* (1931–), xviii, no. 792 003. Interestingly, this act of beneficence did not stop the inhabitants of Karak from rebelling against the same sultan a few years later.

The Mamluk period has left an extensive assemblage of extant monumental architecture in central and southern Jordan. Concentrated in the phase between the capture of Karak by Baybars in 1263 and the middle of the fourteenth century, Mamluk sultans and governors sought both to construct new buildings and renovate existing monuments. An examination of the written sources and the surviving monumental inscriptions reveals that their contribution to the infrastructure of the region was even more considerable than it might first appear with projects including the laying out of roads and the creation of the postal network (*barīd*). The pattern of patronage during the first century of Mamluk rule reveals a number of consistent preoccupations. Mamluk rule in Bilād al-Shām arose out of the collapse of the Ayyubid confederacy and the Mongol invasion of 1259–60. Central and southern Jordan formed part of the eastern frontier of the new empire and it remained vulnerable to future Mongol incursions. More than any threat from the Franks on the Syrian littoral, it was the ever-present danger of future Mongol expeditions that made it essential to shore up the defences of Jordan. In addition, the Mamluks needed to establish efficient communications systems in Bilād al-Shām that would bring news of danger to Cairo. Of course, the maintenance of such defences brought additional benefits for the state in that the garrisons in the castles could be employed in guarding the main trade and pilgrimage routes as well as in the control of the local population, most importantly the bedouin of the eastern desert. The Mamluks set about establishing an extensive bureaucracy both in Karak and in local centres such as Ḥasbān, and this necessitated the construction of a wide variety of buildings in the region. Lastly, the regime was also keen to establish its credentials as defenders of Sunni Islam, and this last aspect can be seen in the patronage of mosques and shrines in central and southern Jordan.

Some of the most impressive Mamluk fortifications are to be found at Karak. The citadel of Karak was probably in need of considerable repair following the attacks made against it by the armies of Baybars. After 1263 the sultan set about improving the defences, most notably around the south end and the west wall.¹⁶⁸ The massive south keep (pls. 9 & 14) was built over the remains of earlier towers and provides

¹⁶⁸ Repairs to the castle are mentioned in Maqrīzī (1934–72), I, p. 492. See also Amitai-Preiss (1995), p. 76. See also comments in Meinecke (1992), II, p. 15.

protection against possible bombardment from the nearby hill, Umm al-Thalj, to the south. Other improvements to the citadel may be dated to the Baḥrī Mamluk period. A new entrance was established on the west side (pl. 15). Approached by a narrow path on the edge of a steep slope, this route into the castle could be easily defended in times of emergency. Evidence of Mamluk work can be seen elsewhere in the castle in the form of outer fortifications and inscriptions. On the west side a reception chamber retains some elements of its original decorative program in the form of a carved geometric interlace design (pl. 16). The discovery of a group of carved and painted stucco fragments (pl. 39), originally from one or more window grilles, also suggests that the residential areas designed for the Mamluk elite would have been less utilitarian than they appear today.

A complex just north of the south keep (pl. 6) has been excavated by Robin Brown. Accessed by a narrow corridor, the centre of the complex is a reception area composed of a small open courtyard with two larger chambers to the north and south and two smaller *iwāns* to the east and west. The complex comprises additional rooms to the north and the west. While the masonry construction is of good quality, the small scale of the complex contrasts with the grand scale and lavish decoration of imperial Mamluk monuments in the centres of power. The main room on the west side appears to have functioned as a mosque, though the presence of an arrow slit on the east wall (now facing into one of the main corridors leading along the eastern fortified wall) indicates that the Mamluk designers made some use of the existing Frankish architecture of this sector of the citadel. It is possible that this complex can be identified with the palace (*qaṣr*) constructed in Karak in 1311 (see below),¹⁶⁹ and the material excavated within the chamber south of the courtyard also indicated a construction date in the fourteenth century.¹⁷⁰ Other references to work within the castle can be found in the written sources. During a stay in Karak in 1286 sultan Qalāwūn ordered the

¹⁶⁹ There are, however, references to a *dār al-salṭāna* constructed in the castle by al-Nāṣir Dāwūd (Brown [1989], p. 290), while one might also point to the similarities with the four-*iwān* chamber, attributed to al-Mu'azzam 'Īsā, located in Shawbak castle and other related Ayyubid and Zengid structures in Syria. That said, the absence of Ayyubid material in the excavation of the Karak complex does indicate that a construction date in the Mamluk period is more plausible.

¹⁷⁰ Brown (1989), pp. 292–95. The material record provides evidence that the complex continued to be occupied into the Ottoman period.

restoration of a disused pool (*birka*) in the castle and other unspecified improvements.¹⁷¹ In the 1340s a temporary roofed structure (*tārīma*) was erected in the castle by sultan al-Nāṣir Aḥmad under which he would sit and give judgements.¹⁷² Repairs were made to the fortifications of Karak at intervals throughout the Mamluk period following earthquakes and sieges.¹⁷³ Some unspecified refortification was undertaken by a group of amirs who rebelled against the rule of sultan Faraj in 1411.¹⁷⁴

The Mamluk period also witnessed considerable changes in the town of Karak. The existence of a subterranean entrance commissioned by al-Mu‘azzam ‘Īsā does perhaps suggest the presence of some form of defensive wall around the town in the Ayyubid period (there being little reason for its existence if the town was freely accessible by other means), it was sultan Baybars who instigated the most extensive line of fortifications. Only fragments of the original line of walls and towers now survives, but they originally ran from the northeastern and northwestern corners of the citadel to encircle the remainder of the plateau. In some places the wall was provided with simple salients for additional defence, as can be seen on east side of the town. Elsewhere much more substantial towers were constructed. Located on the southeastern tip of the old town the largest of the towers, Burj al-Zāhir (pl. 17), shares features of masonry style and overall planning with the south keep of the citadel. The inscription provides the names and titles of sultan Baybars though no date is given. Another inscription naming Baybars, and containing his motif of the panther, can be found on the smaller tower on the east side known as Burj al-Banawī (pls. 18 & 19).¹⁷⁵ The interior of this tower still contains two lower storeys each with rooms for archers arranged off a central chamber. Built on a completely different plan, the nearby Burj al-Ṣa‘ūb is also believed to date from the period of Baybars, though it now lacks any dedicatory inscription (pl. 20).

There were also significant developments within the town itself during the fourteenth century. The Baḥrī Mamluk sultanate saw the

¹⁷¹ Baybars al-Manṣūrī (1998) p. 255; Maqrīzī ([1934–72], I, p. 732) mentions that the sultan authorised the cleaning of cisterns in Karak.

¹⁷² Shujā‘ī (1977), p. 248: The structure was torn down after the defeat of the sultan in 1344. My thanks to Donald Richards for bringing this passage to my attention.

¹⁷³ Brown (1989), p. 290; Jazarī (1949), p. 29, no. 161.

¹⁷⁴ Ibn Taghrībirdī (1909–36), vi, p. 240.

¹⁷⁵ *RCEA*, XII, (1931–), pp. 222–24, nos. 4733–34; Duc de Luynes (1871–76), II, pp. 199–200, 205. See also Meinecke (1992), II, p. 15.

establishment of the foundations of a model Islamic city in Karak. In 1311 sultan al-Nāṣir Muḥammad's governor, Sinjār al-Jāwālī, ordered the construction within Karak of a palace (*qaṣr*), a mosque, a *madrasa*, a *khān*, a *sabīl*, a *māristān*, and a public park or parade ground (*maydān*).¹⁷⁶ As noted above, the *qaṣr* may have been located inside the citadel. Sadly, a combination of earthquakes, military destructions and modern development has obliterated any trace of the other structures established under the rule of sultan al-Nāṣir Muḥammad. Abū al-Fidā' records the presence of a *ḥammām* in the valley below the town.¹⁷⁷ The bathhouse also appears, with the village of Ādar and surrounding farmlands, in a *waqf* drawn up for an endowment by sultan Sha'bān in 777/1375.¹⁷⁸ An inscription found in Burj Raqm dated 780/1377–78 records the renovation by Aḥmad b. 'Īsā al-Ḥākīm of a fountain (*sabīl*), though the location of this structure is unknown.¹⁷⁹

Shawbak had fallen to the forces of sultan Baybars in 1261. As the most important military installation south of the Wādī al-Ḥasā', the castle was the subject of extensive patronage in the early Mamluk period (pls. 21 & 23). An undated inscription which now exists in fragmentary form in the stonework of three of the towers of the castle carries the name and titles of Baybars but no further information.¹⁸⁰ Ibn al-Jazarī (d. 1338) reports that in 1292 the entire citadel of Shawbak was demolished with the exception of the keep (*qulla*).¹⁸¹ Given the existence of substantial Frankish structures within the citadel it seems likely that the author was exaggerating the extent of the destruction, but it may account for the limited survival of the earlier fortifications built by Ayyubid rulers. It was under a later sultan, Lājīn, that the castle reached its current form with the construction of a new outer wall punctuated by monumental towers. The towers and walls were designed with covered archers' galleries providing defence from all sides. Recent surveys have

¹⁷⁶ Ibn Ḥajar (1929–31), II, pp. 170–71.

¹⁷⁷ Abū al-Fidā' (1840), p. 247. The bathhouse also appears, with the village of Ādar and surrounding farmlands, in a *waqf* drawn up for an endowment by sultan Sha'bān in 777/1375. There may also have been a *ḥammām* in the town, though this account may also refer to the structure in the valley below Karak. See Ibn Taghribirdī (1909–36), VI, p. 240.

¹⁷⁸ For notes on this *waqf* (Cairo: Dār al-Wathā'iq 8/49) drawn from the partial edition by Yūsuf Ghawānma, see Walker (2004b), p. 136.

¹⁷⁹ Mumani (1988), p. 241. For other fragmentary inscriptions of the Mamluk period, see pp. 194, 196, 241.

¹⁸⁰ *RCEA* (1931–), XII, no. 4735. See also Meinecke (1992), II, p. 13.

¹⁸¹ Ibn al-Jazarī (1949), p. 28, no. 155.

revealed that these new fortifications are built around and on top of the Frankish curtain walls and towers, and have been aptly described as a ‘corset’ for the earlier structure.¹⁸² The four extant inscriptions—three of which are dated to 697/1297–98—record the foundation and renovation (*tajdīd*) of the castle by the sultan as well as giving the name of the amir, ‘Alā’ al-Dīn Qubruṣ al-Manṣūrī, as the one responsible for the work. The longest inscription also mentions one Muḥammad b. ‘Abd al-Ḥamīd as the engineer (*muhandīs*) of the project.¹⁸³ The end of the thirteenth century seems to mark the culmination of significant Mamluk patronage at Shawbak and, by the mid fourteenth century, the castle was no longer garrisoned with troops.¹⁸⁴ While the name of Sal’a is recorded in Dimashqī’s list of the territories of Karak, there is little to suggest that by 1300 this or any of the other minor Frankish fortifications in the south of Jordan were still operational. Some Mamluk military presence was probably maintained on the Red Sea coast, either on the mainland or at the Ayyubid fort of Qal’at Ayla.

There is evidence for considerable Mamluk activity in Balqā’ and the adjacent section of the eastern Jordan valley. The Ayyubid fortress of Salṭ continued in operation, and repairs were ordered by sultan Baybars in 659/1260–61.¹⁸⁵ ‘Ammān also benefited from Mamluk patronage, particularly at the time the town was elevated to the status of the capital of the *wilāya* in 1356, or a few years after. This change in administrative status was probably accompanied by the erection of new governmental buildings, though the suggestion that the amir Sarghtamish ordered the construction of a *madrasa* there has recently been contested.¹⁸⁶ Recent excavations have revealed extensive construction of administrative, and related buildings at Ḥasbān during the Mamluk period. It is possible that Baybars refortified the southwest tower on the citadel at Ḥasbān,¹⁸⁷ though the most extensive remodelling of the site occurred in the fourteenth century. Constructed of crudely shaped limestone masonry, often laid without mortar, the area within the fortified walls does not compare to the grandeur and scale of Karak citadel. That said, the

¹⁸² Faucherre (2006). See especially, pp. 50–64 and figs. 6–11.

¹⁸³ *RCEA* (1931–), xiii, nos. 5048–51; Duc de Luynes (1871–76), ii, pp. 209–10, no. 26. See also Meinecke (1992), ii, p. 84; Bakhit (1997), p. 373.

¹⁸⁴ ‘Umarī (1988), p. 237.

¹⁸⁵ Meinecke (1992), ii, p. 10; Bakhit (1995), p. 999.

¹⁸⁶ In the *Kūtāb al-Sulūk* Maqrīzī writes about the *madrasa* in the town, but this word should probably be read as *madīna*. See comments in Walker (2003), p. 245, n. 23.

¹⁸⁷ Walker and LaBianca (2003), p. See also Al-Majāli and Mas‘ūd (1987), p. 312.

complex of buildings is substantial comprising an audience hall with an *iwān* to the west (i.e. an abbreviated form of *qa'ā*), storerooms, domestic dwellings and, possibly, barracks. The diversity of the metal and ceramic finds points to the presence of members of the Mamluk elite on the site.¹⁸⁸ The area also contained a bathhouse;¹⁸⁹ another indication of the potential political importance of the local governor (*wālī*) of Balqā' in the political life of southern Bilād al-Shām during the fourteenth century.

A vital element in the maintenance of security on the frontiers of the empire was the *barīd*. Baybars presumably incorporated Shawbak and Karak into this network following the recapture of these castles from al-Mughīth in 1261 and 1263. None of the *barīd* stations of central and southern Jordan has been identified in archaeological surveys, but it is possible to gain some information on them by turning to written sources. The terminus points of the network were the capitals of the *mamlakas* but smaller stations were maintained all over the empire. Karak was situated on routes to Damascus and to Gaza. Between Karak and Shawbak there were three unnamed stations (*s. markaz*).¹⁹⁰ Other post stations were located in the Jordan valley and Balqā'.¹⁹¹ The *barīd* survived until the reign of al-Mū'ayyad Shaykh (r. 1412–21), but had been in decline since the death of al-Nāṣir Muḥammad in 1341.¹⁹² In addition to the *barīd*, the authorities in Cairo sent out and received information by carrier pigeon. Dovecots were placed on the same sites as the postal stations. Amongst those in Jordan and Palestine were Karak,

¹⁸⁸ For the most detailed description of the excavations, see Walker and LaBianca (2003); Walker (2003), pp. 250–56. These publications contain preliminary analysis of the dating of the phases of construction during the Mamluk period. There is also considerable evidence of destruction—both fire and structural collapse—that may be correlated with one of the earthquakes that hit the region between 1341 and 1458.

¹⁸⁹ De Vries (1986); Walker and LaBianca (2003), pp. 447, 451.

¹⁹⁰ Khalīl al-Zāhirī (1894), pp. 119–20. Gaza to Karak: Bilāqis, Khalīl, Janbā, al-Zuwayr, Ṣāfiyya, Hafar, Karak. Damascus to Karak: Qatība, Baradiyya, Burj al-Abyaḍ, Ḥasbān, Qanbis, Dibyān, Qaṭ'a al-Mūjib, Ṣafra, Karak. Sauvaget (1941), p. 95: he adds Qūniyya (3km south of Zarqā'). Qalqashandī (1913–18), xiv, pp. 379, 383. Gaza to Karak: Milāqis (Bilaqis?), Khalīl, Janbā, Ṣāfiyya, Karak. Damascus to Karak: Ṭafṣ, Qūniyya, Burj al-Abyaḍ, Ḥasbān, Dibāj (Dhibān?), Akriyya, Karak.

¹⁹¹ 'Umarī (1988), p. 255; Qalqashandī (1913–18), xiv, p. 380; Karīm (1996), p. 125; Sauvaget (1941), fig. 20.

¹⁹² Khalīl al-Zāhirī (1894), p. 120. A reference to the reduced status of the *barīd* appears in Ibn Taghribirdī (1909–36), v, pp. 30–31. Tīmūr is reported to have destroyed *barīd* stations in Syria. See Maqrīzī (1911–27), iv, p. 88. The decline of the service is summarised in Sauvaget (1941), pp. 80–84.

Şāfiyya, Nāblus, Jerusalem, Gaza and Khalīl.¹⁹³ Lastly, racing camels were used for the secret deliveries. The head of this network (known as the *hajjān*) in southern Jordan resided at Karak.¹⁹⁴

Like the Ayyubids before them, Mamluk sultans and governors were also concerned with the improvement of the transport infrastructure in central and southern Jordan. The most important of the roads running through the areas controlled by Karak was the King's Highway, but there were also routes running west into Palestine. Baybars commissioned a bridge over the Jordan river at Dāmīya which was completed in 1266.¹⁹⁵ In 1288 repairs were made to the bridge by the governor of Jerusalem.¹⁹⁶ A further illustration of its continued role in commerce and communications between southern Balqā' and central Palestine is the fact that, in the late fourteenth century, sultan Barqūq undertook additional repairs to the bridge.¹⁹⁷ A *qaşr* located near to Fayfā' at the south end of the Dead Sea has been tentatively dated to the Mamluk period.¹⁹⁸ The Mamluk authorities also had to ensure the security and arrange for the supplying of the annual *hajj* caravans passing via the land routes from Damascus and Cairo. The reservoir at Zīza' was an important staging point on the Syrian pilgrimage route, and a well constructed limestone fort was placed next to it during the Mamluk period.¹⁹⁹ A small square fort of thirteenth-century date, located on a vantage point above the Zarqā' river northwest of 'Ammān, and known as Qaşr al-Shabīb, was probably also designed with the intention of guarding the road south.²⁰⁰ According to the geographer, Dimashqī, Ma'ān also contained a pilgrimage station (*manzila li 'l-ḥujjāji*), though he does not give any further details on its appearance or the patron responsible for its construction.²⁰¹ This structure may be associated with the improvements to the southern sections of the pilgrimage road by al-Mu'azzam 'Īsā.

¹⁹³ Khalīl al-Zāhirī (1894), p. 118.

¹⁹⁴ Ayalon (1996), p. 46 (no source is given for this statement).

¹⁹⁵ Meinecke (1992), II, p. 22. Other bridges were constructed over the Jordan river providing access to the regions of Jordan north of the Wādī Zarqā'. For a more detailed discussion of these bridges, and other ancillary structures, see Kareem (1992 and 2000).

¹⁹⁶ Kareem (2000), p. 11.

¹⁹⁷ Meinecke (1992), II, p. 277.

¹⁹⁸ King *et al.* (1987), p. 449–50.

¹⁹⁹ Petersen (1991 and 2001); Walmsley (2001), pp. 531–32.

²⁰⁰ Petersen (2001), pp. 685, 690; Walmsley (2001), p. 530.

²⁰¹ Dimashqī (1866), p. 213.

While there is little evidence of architectural patronage in central and southern Jordan during the Burjī Mamluk period, one exception to this overall pattern of neglect may be found on the coast of the Red Sea. The penultimate sultan, al-Ashraf Qānṣūh al-Ghawrī (r. 1501–16), ordered an extensive renovation of the facilities along the *ḥajj* route from Cairo to Mecca. This included a fort (*galʿa*), *khān* and cisterns at ʿAqaba which were completed in 1509.²⁰² The substantial fort is built on a rectangular plan with four round corner towers and on the north side a monumental entrance flanked by smaller towers. The extant Mamluk inscriptions name the sultan as well as the amir, Khāyṛ Bak (pl. 34).²⁰³ It may be that al-Ghawrī was merely responsible for the refurbishment of an existing Mamluk structure (perhaps constructed by sultan al-Nāṣir Muḥammad ibn Qalāwūn in c. 1320).²⁰⁴ Ongoing excavations are examining whether the present structure was built over the remains of earlier Frankish and Muslim structures.

Examples of Mamluk religious patronage can be found all over the regions controlled by Karak. Much of this activity was focused on sites in central and southern Jordan that were already associated with *ziyāra*. The shrine of Jaʿfar b. Abī Ṭālib, and the other martyrs from the battle of Muʿta may have attracted the patronage of the Fatimids, but the most extensive remains date from the fourteenth century (pl. 33).²⁰⁵ Inscriptions from this shrine at Mazār record work carried out to the structure in 727/1327 and 752/1352. The earlier inscription states that the renovation was undertaken by the *nāʾib al-saltāna* of Karak and Shawbak, Bahādur al-Badrī, while the second names a later holder of the same office, Sayf al-Dīn Alus and another individual, Ramsūdīn al-Hārūnī.²⁰⁶ The site was evidently revered by members of the Mamluk administration before this date; Nuwayrī (d. 1332) records that the *nāʾir* of Karak and Shawbak was interred at the shrine in 1276.²⁰⁷ The Christian shrine that had housed the tomb of Aaron (Arabic: Nabī Hārūn)

²⁰² Ibn Iyās (1960–74), iv, pp. 133, 163; v, p. 95; Meinecke (1992), ii, pp. 460–61; Alhazmeh (1993), p. 71, n. 89.

²⁰³ For the architecture of the fort, see Glidden (1952); Mumani (1988), pp. 293–317 (for the Mamluk inscriptions, see pp. 304–305).

²⁰⁴ Walmsley (2001), pp. 532–33. See also Pringle (1997), p. 113, no. P12.

²⁰⁵ Walmsley (2001), p. 536. See also an undated inscription in *RCEA* (1931–), ii, no. 540.

²⁰⁶ *RCEA* (1931–), xiv, no. 5545; xvi, no. 6169; Duc de Luynes (1871–76), ii, pp. 206–207, nos. 23–24; Meinecke (1992), ii, pp. 146, 217.

²⁰⁷ Nuwayrī (1923–92), xxx, p. 231.

on Jabal Hārūn (near Petra) was replaced in the fourteenth century by the small domed structure (*maqām*) that exists today.²⁰⁸ An inscription from the site contains a damaged inscription providing a date for the construction between 731–39/1330–39.²⁰⁹ Further inscriptions state that the site was restored in 900/1494–95 and again in 909/1503–1504.²¹⁰ Another important shrine, one of the caves traditionally associated with the seven sleepers (*Qurʾān* xvii.19–26) at al-Kahf, probably also received a mosque in the Mamluk period.²¹¹ On the other side of the Dead Sea in Palestine patronage of the holy sites at Khalīl is recorded all through the Mamluk period.²¹² Funds were also directed toward the renovation of other mosques. The construction of a new doorway and the addition of a new pillar (*rukn*) were undertaken in 782/1380–81 (and at some earlier date) at a mosque in Wādī Karak. The inscription names the captain of the guard (*raʾīs nawba*), Zayn al-Dīn Baraka al-Jūbānī, and the governor of Karak, Mankalī al-Ṭarkhānī, as those responsible for the work.²¹³ Excavations have also revealed a number of small mosques of Ayyubid-Mamluk date that were presumably constructed without state patronage.²¹⁴

Ottoman Period

Under Janbirdī al-Ghazālī, a mamluk who became the governor of Damascus in 1518, the region of Karak-Shawbak was administered as part of the province of Damascus (fig. 6). About two years later Karak-Shawbak was elevated to the status of a separate *sanjaq* or *liwāʾ*

²⁰⁸ Walmsley (2001), p. 534. The similarities between this and the shrine associated with Abū Sulaymān al-Dirānī near Shawbak perhaps suggest a fourteenth-century date for the latter structure.

²⁰⁹ *RCEA* (1931–), xv, no. 5777; Meinecke (1992), II, p. 156. The work was directed by *al-amīr al-kabīr* Sayf al-Dīn Ruknī(?) al-Nāṣirī.

²¹⁰ Pringle (1993–), I, pp. 251–52, no. 103.

²¹¹ Walmsley (2001), pp. 534–36.

²¹² For instance *RCEA* (1931–), XI, no. 4386; XII, nos. 4787, 4788; XIII, nos. 4876, 4877, 4943, 5079, 5146, 5147; XIV, nos. 5248–50, 5511; XV, nos. 5619, 5925. It should be noted that Khalīl was only included in the administrative regions of Karak during the latter part of the thirteenth century.

²¹³ *RCEA* (1931–), XVIII, no. 782 004; Duc de Luynes (1871–76), II, pp. 198–99, no. 16; pp. 201–202, no. 18. See also Mayer (1933), pp. 101–102; Meinecke (1992), II, p. 263.

²¹⁴ Walmsley (2001), pp. 537–38. Cf. comparable rural mosques in northern Jordan discussed in Walker (2005).

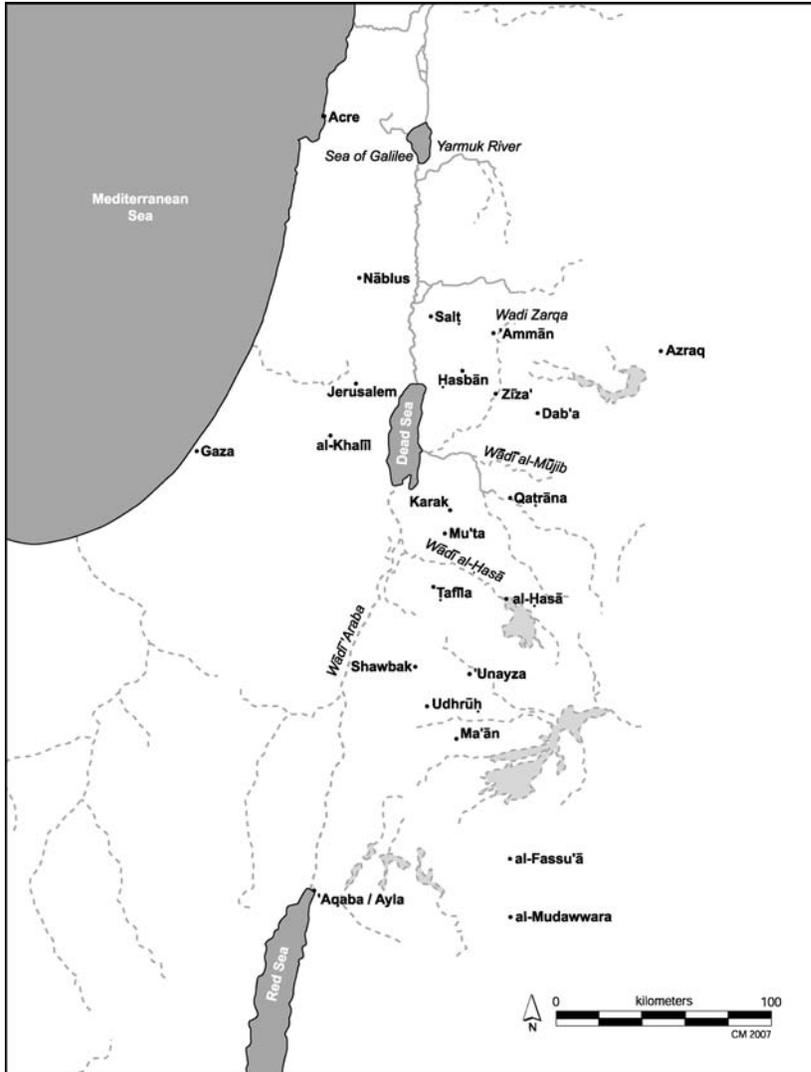


Figure 6. Map of Jordan during the early Ottoman period.

(the whole area being split into three *nāhiyas*: Karak, Jibāl Karak and Shawbak). At times during the sixteenth century Karak-Shawbak was part of the *liwā'* of 'Ajlūn.²¹⁵ Although revenue was derived from land in Karak, according to Evliya Çelebi (d. c. 1682), it was not one of the *sanjaqs* in which the *tīmār* and *za'āma* holders were expected to provide soldiers for the Ottoman province of Damascus.²¹⁶ Many of the functions of the *sanjaq* probably continued to be administered by officials of the previous regime but the reduced importance of the region in the new empire must have led to a reduction in the overall number of staff. In the late sixteenth and seventeenth century, as southern Jordan gradually reverted to being ruled by local chiefs, the administrative population within the main towns must have dwindled. After c. 1650 the only imperial presence recorded in Karak was during the occasional military incursions ordered by Damascus or Cairo.

The image of decline in the southern provinces of Bilād al-Shām found in the work of Arab historians of the late Mamluk and early Ottoman periods contrasts with the picture of the relatively populous and prosperous region described in the cadastral survey, the *daftar-i mufaṣṣal*. While one should not assume that estimates of revenues corresponded exactly to actual monies collected by the state, Hütteroth and Abdulfattah are probably correct in asserting that the registers represent a reasonably accurate estimate of the number of villages in each province and of the level of agricultural productivity at the end of the sixteenth century.²¹⁷

The *daftar*s can also be used to infer the existence of administrative officials both to record the information and to collect the tax revenues. At the head of the fiscal administration of Syria was the *daftardār* who was responsible for the division of lands into state domain (*khāṣṣ-i shāhī* and *khāṣṣ-i mīrī liwā'*), fiefs (s. *za'āma* and *tīmār*), *waqf*, and privately owned land (*mulk*). In his duties he was assisted by a series of state officials. The tax was collected by *amīns* and *subāshīs* (the same as the *mubāshirs* of the Mamluk period) and they were helped by Arabic-speaking assistants. Soldiers might also be employed in the process of collecting the tax.²¹⁸

²¹⁵ Hütteroth and Abdulfattah (1977), p. 18. The same administrative arrangement is found in 1538. See Bakhit and Hmoud (1989).

²¹⁶ Evliya Çelebi (1834–50), I, pt. 1, pp. 93, 104.

²¹⁷ Hütteroth and Abdulfattah (1977), pp. 10–11. See also Bakhit and Hmoud (1989); Bakhit and Hmoud (1991).

²¹⁸ The tax officials and methods of collection are discussed in Bakhit (1982), pp. 143–47; Lewis (1954), pp. 480–81.

Later the gathering of tax revenue was delegated to tax farmers appointed from the local population. It is not known whether any of the officials working for the *daftardār* were permanently located at Karak in the sixteenth century and later although a treasury (*bayt al-māl*) was located in the town.²¹⁹

The territories of the *nāhiyas* of Karak, Jibāl Karak and Shawbak were all counted as *khāṣṣ-i mīrīlūwā*.²²⁰ The land was split into fiscal units which consisted of the administrative centre of the *lūwā*³ or *nāhiya* (*nafs*), village (*qarya*) and bedouin tribe (*jamā'a*).²²¹ This last category applies only to the *nāhiya* of Shawbak. These fiscal units were assessed for each crop produced in the area. Additional taxes were levied such as poll tax on non-Muslims (*jizya*), trade with the *hajj* caravan,²²² and the use of facilities such as watermills (s. *tāhūn*). The presence of watermills (four in Karak and two in Shawbak²²³) deriving an annual revenue for the *mīr lūwā*³ suggests some level of investment by officers of the state in the economic infrastructure of the region.²²⁴

The priorities of Ottoman investment in southern Jordan were twofold: first, ensuring the continued safety of pilgrims; and second, maintaining good lines of communication between Syria and Egypt. Collaboration between different state officials was one aspect of this larger policy. The *mīr lūwā*³ of Karak-Shawbak was responsible for the safety of both the Syrian and the Egyptian *hajj* caravans when they passed through the south of Jordan. The governors of the *sanjaqs* were responsible for keeping law and order, protecting caravans from

²¹⁹ Hütteroth and Abdulfattah (1977), p. 171.

²²⁰ 'Ayn-i 'Alī (1979), p. 25: this author states, however, that the *mīr lūwā*³ of Karak-Shawbak received an annual salary (*sāhiyāne*) instead of the conventional income from fiefs. See also Heyd (1960), p. 41; Poliak (1977), p. 43.

²²¹ Hütteroth and Abdulfattah (1977), pp. 23–29.

²²² Hütteroth and Abdulfattah (1977), p. 35: a tax on trading with the *hajj* caravan (*rasm bāzār qālīfat ḥājjiyān*) is mentioned on the taxes levied for Karak.

²²³ Hütteroth and Abdulfattah (1977), pp. 171–74. See also Bakhit and Hmoud (1991), pp. 87–88. This edition of the *daftar* includes five mills in Karak (one ruined) and elsewhere in the *nāhiya* at Fadān (sp. ?), three at 'Irāq and four at Ṭaffila. Shawbak contains thirteen mills (eleven ruined), and elsewhere in the *nāhiya* two at Shāhid (sp. ?), three at Wādī Daghīm (sp. ?), and three at Naḥīl (sp. ?). The 935/1538 *daftar* records a tax on mills (*rasm ṭawāḥīmī*) in the regions of Karak (three mills are specified at 'Irāq while at Karak and Bidān [sp. ?] the amount of tax is mentioned but not the number of mills), Shawbak (two at Shāhid) and Wādī Mūsā (two in Wādī Daghīm and three at Ṭawāḥīn). See Bakhit and Hmoud (1989), p. 43.

²²⁴ The presence of so many ruined mills in the *nāhiya* Shawbak (see n. 223) perhaps indicates a prolonged lack of investment in the region during the late Mamluk and early Ottoman periods.

bedouin raiding, collecting taxes, and providing military forces to be sent to conflicts at the order of the sultan (the *sanjaqs* of southern Jordan and south Palestine were usually exempt from sending troops to foreign campaigns).²²⁵ Most often the military responsibilities expected of these areas took the form of the governors of neighbouring *sanjaqs* cooperating in the suppression of local skirmishes.²²⁶ The aid of the governor of Damascus was also enlisted in two edicts (s. *hüküm*) issued by the sultan in the 1560s to revive agricultural production and reduce the bedouin harassment of both the sedentary population and the caravans passing through southern Jordan.²²⁷ Each fort in Jordan had to be kept supplied with barley, camel fodder and miscellaneous items required for the annual *hajj*. The local tribes were employed in the transport of barley to the *hajj* stations. The forts were garrisoned with between twelve and fifty men.²²⁸

The most extensive state patronage in southern Jordan during the earlier Ottoman period was the annual allocation of money to the *amīr al-hajj*.²²⁹ This officer was responsible for the provision of animals needed during the *hajj* and for the safety of pilgrims on their journey. The costs of this enterprise were supposed to be borne from the revenues of the southern provinces.²³⁰ In practice, however, Karak-Shawbak was, as Qānṣūh al-Ghazzāwī (the governor of the region in the latter part of the sixteenth century) had stated in a letter to the sultan, inhabited principally by a nomadic population and produced little taxable surplus. Consequently, the costs were often met by central government.²³¹ Further, the sultan at the request of Qānṣūh, also commanded the assistance of the governors of Damascus, Şafad, Jerusalem and Lajjūn in subduing the rebellious al-Mafārija bedouin in the south of Jordan

²²⁵ Heyd (1960), pp. 76–77 (citing Kepeçi, vol. LXXI, p. 37).

²²⁶ Heyd (1960), p. 77 (summarising Mühimme Defteri, vol. XLIV, no. 359).

²²⁷ Bakhit (1982), pp. 212–13 (citing K.888, fols. 196a, b).

²²⁸ Barbir (1980), pp. 141–46. The fort of Maʿān in 1742 is recorded as storing 78.5 loads (sacks?) of barley (see: p. 141 n. 98 [citing Topkapı Saray Arçivi Evrak, 2588/12, 2588/4]).

²²⁹ Qalqashandī (1913–18), XII, pp. 314–15: the duty of keeping safe the *darb al-hajj* in the Mamluk period was taken by the *nāʾib* of Qibliyya (capital, Buṣrā). See also Bertrandon de la Brocquière in Wright (1848), p. 303.

²³⁰ Shaw (1962), pp. 240–42: the author gives an account of the large sums spent on the *hajj* from Egypt by the *amīr al-hajj* in the early Ottoman period.

²³¹ Bakhit (1982), p. 214 (citing Mühimme Defteri, vol. XIV, no. 1515, p. 1023; vol. X, no. 563, p. 47).

in 1576.²³² Damascus earned a considerable sum during the *hajj*, and so state investment was deemed justifiable as long as the *amīr al-hajj* retained effective relations with the influential tribes of Jordan and the Arabian desert.

During the rule of sultan Süleymān I (r. 1520–66), the annual pilgrimage from Damascus was shifted from the previous route (following the King's Highway) to a new road on the edge of the eastern desert, known as *Ṭarīq al-Bint* in honour of a daughter of Selim I (r. 1512–20). While the eastward shift of the *hajj* had been apparently prompted by the ever-present danger from bandits along the King's Highway, this radical change necessitated the construction of a new line of forts and watchtowers (s. *burj*) in Jordan and Arabia. The first phase of fort construction occurred in the mid sixteenth century and included Qaṭrāna (pl. 35) and Ma'ān in 1531, and 'Unayza (pl. 36) in c. 1576.²³³ Usually associated with sources of water (cisterns or reservoirs) and graveyards, these small, square plan forts were built from local limestone or basalt. The exterior walls were provided with machicolations and arrow slits while the interiors comprised a central courtyard surrounded by stables and storerooms on the ground level and accommodation and a small mosque on the first floor. A stairway provided access to the parapet.²³⁴ The Mamluk forts, Qaṣr al-Shabīb and Zīza', were well located to serve the pilgrim caravans and continued to function as part of the new network, while Dab'a (also Qal'at al-Balqā') was evidently renovated in the sixteenth and the eighteenth centuries.²³⁵ In the area west of the desert road the Ottoman presence was also strengthened: the fort at Saḷḷ was renovated,²³⁶ and the castles of Karak and Shawbak garrisoned with sixty-six and sixty-eight *müstahfizan* (fortress soldiers) and eleven and six *mütefferika* respectively.²³⁷ It is also possible that a *khān*, known variously as Khirbat al-Dusaq and Khān al-Zabīb, was constructed near Shawbak in the mid sixteenth century.²³⁸ Another site

²³² Bakhit (1982), p. 215 (citing Mühimme Defteri, vol. xxviii, nos. 277, 667, 685).

²³³ Qaramānī (1865), p. 440; Ghazzī (1959), p. 157; Mehmed Edib (1825), pp. 124–25, 127, 132, 136; Other forts constructed in this period on the *hajj* route are Dhāt Ḥajj, Tabūk, Ukhayḍir and 'Ulā. See Petersen (1995 and 2001).

²³⁴ For a plan of Qaṭrāna, see Petersen (2001), figs. 28.2, 28.3.

²³⁵ Petersen (2001), pp. 685, 690.

²³⁶ Bakhit (1995), p. 1000.

²³⁷ Bakhit (1982), p. 99 (citing Maliyeden Müdevver, no. 3723, pp. 28–43).

²³⁸ McQuitty (2001), p. 569.

that may date to this phase is the structure built on the ruins of the old Roman garrison town of Udhrūḥ.²³⁹ Inscriptions on the walls of the fort at ‘Aqaba record work undertaken there in 996/1588–89 by order of sultan Murād III (r. 1574–95). One inscription gives the name of the architect (*mi‘mār*) as Maḥmūd Muḥammad Khān.²⁴⁰

The seventeenth century provides little evidence of active patronage of architecture, though some renovations were carried out on existing structures. For instance, the local governor, ‘Abd Allāh Bāsha al-Nimr, ordered construction work at the *qal‘a* of Ma‘ān and ‘made safe’ the road to the Ḥijāz in 1655–56.²⁴¹ A new phase of building work can be identified in the eighteenth century, and the designs of the new fortresses reflect changes in military technology, most importantly the wider use of firearms. The new forts in central and southern Jordan were located at Ḥasā, Fassu‘ā (also known as Zahr al-‘Aqaba) and Mudawwar (also known as Jughaymān: 1730–33). The first of these, Qal‘at al-Ḥasā (pl. 37), is located at the eastern end of the *wādī* and guards a bridge that is mentioned by a Turkish traveller, Meḥmed Edib, who performed the pilgrimage in the 1730s.²⁴² The bridge is supported on two arches and the road above retains its original cobbled surface (pl. 38). Some of the existing forts were also manned with troops during this phase. 300 soldiers are recorded at Karak and Qaṭrāna in 1728, and a garrison was still present in Karak in the 1740s.²⁴³

²³⁹ Killick (1983), p. 115; McQuitty (2001), p. 569. The authors point to similarities with the architecture of the *hajj* fort at Qaṭrāna.

²⁴⁰ Mumani (1988), pp. 306–307.

²⁴¹ Nimr (1975), I, p. 80.

²⁴² Meḥmed Edib (1825), pp. 125–26; Barbir (1980), p. 136.

²⁴³ Barbir (1980), p. 149 (citing Maliyeden Müdevver, no. 2816, p. 94); Ibn Ṭūlūn (1952), p. 219.

CHAPTER FOUR

ECONOMIC SURVEY OF KARAK AND ITS DEPENDENT REGIONS

This chapter presents an economic survey of Karak and its dependent regions based on written sources of the Early and Middle Islamic periods. This information is supplemented with the accounts of nineteenth- and early twentieth-century travellers and modern archaeological evidence. The aim of this diachronic study is to establish the principal sources of revenue (from agriculture, manufacturing, trade and mineral exploitation) within the regions that have been controlled by Karak for all or part of the period *c.* 1100–1650.

It is important to acknowledge from the outset that the sources utilised in this chapter vary both in content and reliability. At the lowest level, some written descriptions merely state that a given region is fertile or prosperous. Other sources supplement this generalised picture with information concerning cultivation, livestock, and mineral reserves. Accounts including descriptions of the processing of agricultural products or manufacturing may be used to infer the development of greater specialisation of labour. Other indicators of increased economic activity are the presence of markets. Rarely, sources also specify the monetary value of the revenue derived from a region or an industry. Caution must be exercised, however, in the use of all such written sources. The possibility of inaccuracies of detail and anachronistic references to industries or activities important in an earlier period but moribund at the time of writing cannot be discounted from the assessment of a given source.¹

The most detailed fiscal information available for Palestine and Jordan in the Middle Islamic period is to be found in the Ottoman cadastral surveys (*daftar-i mufaṣṣal*) of the sixteenth century.² Contained in these

¹ For instance, see Ashtor (1981) for a discussion of references to the sugar industry.

² Editions of two of the surveys of the *livāʾ* 'Ajlūn have been published. For the *c.* 935/1538 *daftar* see Bakhit and Hmoud (1989) and for the 1005/1596 *daftar*, see Hütteroth and Abdulfattah (1977) and Bakhit and Hmoud (1991). The edition by Hütteroth and Abdulfattah covers other *livāʾ*'s in Palestine and Jordan. Being the most

documents are the revenues expected from the towns (*s. nafs*), villages (*s. qarya*), partially cultivated but unoccupied land (*mazrā'a*), and tribal groups (*s. jamā'a*) of the *liwā's* of 'Ajlūn, Quds al-Sharīf (Jerusalem), Gaza, Şafad, Lajjūn and Nāblus. The total figure (*yakūn*) for each fiscal unit consists of a percentage of the income of that unit and the rate of taxation. In most cases the records for each unit are subdivided into the crops, livestock, and trade.³ The incomes due to the holder of the property (*pādīshāh*, *mīr liwā'*, *tīmār* and *za'āma* or *waqf*) for each activity are stated.

The detailed evidence provided by the *daftar*s allows one to compare the fiscal value of individual *nāhiyas*. More problematic, however, is to make comparisons with data from other texts, largely because of the uneven and incomplete nature of the available source material before the sixteenth century. Another serious problem is that the precise relationship between the revenues per fiscal unit stated in each *daftar* and the actual production per unit is difficult to gauge with any certainty. While the sums quoted in the records are probably reasonably close to those which the state expected to collect, the value of the annual fiscal yield of each unit is unlikely to be calculated by multiplying the total sum (for crops and other products) given in the *daftar* by the reciprocal of the rate of taxation.

The probable disparity between the notional figure sum extrapolated from the figures in the *daftar*s and the *actual* income per unit is due to several factors. Jeremy Johns points out that the figures given for wheat and barley in the *daftar-i jadīd* (of 1005/1596) are divisible by 140 and 80 respectively. This fact probably indicates that cereal crops were traded by the sack (*ghirāra*), and so wheat and barley were recorded according to the official price per sack. He concludes that the process of rounding up to the nearest sack would have led to a deviation of $+/-70$ *aqja* for wheat and $+/-40$ *aqja* for barley per fiscal unit. He also points out that some items such as the raising of cattle were apparently exempt from taxation, thus creating a considerable incentive for farmers to divert

accessible edition, the publication of Hütteroth and Abdulfattah is used as the principal reference in this chapter.

³ The taxable items given for the *nāhiyas* Salt, Karak, Jibāl Karak, Shawbak, Ghawr, and Khalīl are wheat (*hūṭa*), barley (*sha'ir*), olives and olive trees (*zaytūn*), sesame (*simsim*), vineyards (*karm*), fruit trees (pl. *ashjār fawākih*), almonds (*lawz*), rice (*ruz*), 'occasional revenues' (pl. *bād-i hawā wa-rasm 'arūs*), 'goats and bees' (pl. *mā'iz wa nahl*), water buffalo (*jāmūs*), market toll (*baj bāzār*), summer crops (pl. *māl şayfī*), water mills (*s. tāhūn*), poll tax (*jizya*).

energy and resources into this activity.⁴ Other forms of economic activity would have been beyond the scope of government control. Trade with, and pillaging of, pilgrims and commercial travellers are alluded to in sources of the Ottoman period. The economic significance of other factors such as the tax evasion and corruption as proportions of the total income of a given area is also impossible to quantify.

The lands controlled by Karak varied through the period under discussion and no attempt is made here to analyse the economic implications of these territorial fluctuations. This survey is split into discussions of: Balqā'; Karak plateau; Jibāl, Sharāt and south; Khalīl/Hebron; and Jordan valley and Dead Sea Ghawr. In addition, the first section deals with the financial contribution made by the nomadic population to the economic life of central and southern Jordan. The first part of each section contains information from sources before 1517. It is assumed that the description of the agricultural products of a given location is not merely specific to the time of the author cited in each instance but indicates more lasting patterns of cultivation. Equally, it is assumed (unless there are indications to the contrary) that inter-regional trade in commodities continued at a relatively constant level through the Middle Islamic period. The observations of nineteenth-century Western travellers are supplemented to the discussion in cases where their descriptions suggest types of specialised cultivation and low level trade that perhaps existed in earlier periods but did not merit a mention in the Middle Islamic sources.⁵ The last part of each section analyses the information found in the *daftar*s of the early Ottoman period. The difficulties of correlating the names in the registers with actual geographical locations means that no attempt is made here to identify the changes in the distribution of the sedentary and nomadic populations within individual *nāhiyas*.⁶

⁴ Johns (unpublished draft), pp. 37–38. High proportions of cattle bones have been reported in contexts dated to the Mamluk and Ottoman periods at Khirbat Fāris. See also Irby and Mangles (1823), p. 361; Doughty (1921), p. 27.

⁵ The use of nineteenth-century testimony is not meant to infer that patterns of economic and social activity in Bilād al-Shām were immune to change through the Middle Islamic period.

⁶ For specific criticisms of the methodology of Hütteroth and Abdulfattah in relation to the location of the villages of the *nāhiya* Karak in the *daftar-i jadīd*, see Johns (unpublished draft), p. 36. Discussing the region north of Karak, Johns questions the correlation of place names in the *daftar* with similarly named modern equivalents. He also points to the possibility that some of the names in the *daftar* have been improperly transcribed leading to additional errors in identification.

Bedouin and Livestock Rearing

A cursory examination of the written sources concerning the activities of the bedouin of Bilād al-Shām could easily create the impression that the tribes of the *bādiya* contributed nothing of value to the economic life of the region. Throughout the period there are numerous accounts of bedouin raiding villages, *hajj* pilgrims, travellers and trade caravans. Mamluk and Ottoman governors in Damascus were often forced to equip expeditionary forces to suppress individual tribes, while in the sixteenth century 'purses of money' (s. *surra*) were given, essentially as a bribe, to bedouin chiefs in order to prevent harassment of the *hajj* caravan.⁷

The relationship between state and bedouin was, however, much more complicated and illustrates well the problems of trying to establish an artificial separation between the economic and political concerns of central government in the Middle Islamic period. There is evidence that the Crusader, Ayyubid and Mamluk states employed bedouin for several important functions. Some tribes were enlisted for surveillance of the border with Iraq. Bedouin were used as an auxiliary force by both Ayyubid and Mamluk rulers to augment the strength of the standing army. *Iqtā's* were also granted to bedouin to guard over important stretches of road used by merchants, pilgrims or troops. They might also be called upon to transport goods. For instance, in 1345 the bedouin of Karak and Balqā' were commanded by sultan al-Šāliḥ ibn Qalāwūn to take 1,000 sacks of barley to 'Aqaba to provision the *hajj*.⁸ Tribes around Karak were also called upon to organise hunting trips for the Mamluk sultans.⁹

The kingdom of Jerusalem derived revenue from the pasturage rights charged to the tribes,¹⁰ but the most tangible financial contribution of the bedouin of the *bādiya* to the governments of the period was in the raising of a large proportion of the livestock of Bilād al-Shām. The livestock was principally composed of sheep and goats,¹¹ although cattle, camels, and horses were also raised. The horses bred by the tribes of

⁷ Saroqhi (1994), pp. 56–57, tables 1, 2 and n. 4 (information drawn from Ottoman archival sources). See also Bakhit (1982), p. 113; Doughty (1921), p. 10.

⁸ Maqrīzī (1934–72), II, p. 276. For the Ottoman period, see Barbir (1980), pp. 143–44, n. 103.

⁹ Ibn al-Dawādārī (1961–92), x, p. 161; Maqrīzī (1934–72), II, pp. 45, 272.

¹⁰ *Regesta* (1893), no. 366; Prawer (1980), p. 476, n. 64.

¹¹ Nuwayrī (1923–92), VIII, p. 262.

the *bādiya* were particularly prized during the Mamluk period both as steeds and for horse flesh, which was consumed at the lavish banquets of the sultan. It was the paramount importance of horses and the other livestock (used to provide food and clothing for the army) for the maintenance of the Mamluk state which formed the basis of the close relationship between the Baḥrī sultans and the bedouin of Jordan. Beneath the level of state control the relationship of bedouin and settled farmer could also be one of mutual benefit. Bedouin brought their flocks onto the plateau for grazing and also cultivated marginal land. Exchange of commodities between the two groups is recorded in nineteenth-century accounts and modern anthropological studies.¹²

It is possible to identify some of the nomadic groups present in central and southern Jordan during the Middle Islamic period. Qalqashandī writes that the principal Arab tribe in Karak was the Banū ‘Uqba, while the Banū Zāhir could be found around Shawbak.¹³ Other bedouin groups exploited the lands of central and southern Jordan as seasonal migrants. Banū Numayr and Banū Rabī‘a are both recorded in the region in the fourteenth century.¹⁴ Later sources indicate that by the end of the fifteenth century the dominant tribe of the Karak plateau and Balqā’ was the Banu Lām.¹⁵ In the sixteenth century and later the main tribe was the Banū Şakhr. Ibn Ṭūlūn (d. 1546) notes that the Banū Şakhr raised sheep, camels, cattle and horses and, on at least one occasion, the animals of the tribe were confiscated by the governor of Damascus in retribution for past disturbances.¹⁶ Large numbers of beasts were owned by the Mamluk sultan but kept in southern Jordan. In 1310 the sultan al-Nāşir Muḥammad ibn Qalāwūn ordered that 300 horses, 120 mules, 120 camels and unspecified numbers of buffalo, cattle, and sheep be brought from Shawbak to Cairo.¹⁷ The same sultan sent his horses to be kept in Karak while his son, Aḥmad, brought 4,000 head of sheep and 400 head of cattle from Cairo in 1341.¹⁸ The Ottoman

¹² Burckhardt (1822), p. 377; Lancaster and Lancaster (1995), pp. 114–15. See also comments about the relationship between sedentary and nomadic groups in Marx (1992).

¹³ Qalqashandī (1913–18), iv, pp. 242–43 (citing ‘Umarī’s *Masālik al-‘abşār*); Ibn al-Furāt (1936–42), ix, p. 139. See also ‘Umarī (1988), p. 113; Qalqashandī (1913–18), vii, p. 188: the Banū Maḥdī occupy Balqā’ and the Banū ‘Uqba are in Karak-Shawbak.

¹⁴ Maqrīzī (1934–72), ii, p. 799.

¹⁵ Ibn Iyās (1960–74), iii, p. 281. See also Ayalon (1988), p. 27, n. 98.

¹⁶ Ibn Ṭūlūn (1962–64), i, pp. 225–26, 264.

¹⁷ Ibn Taghrībirdī (1909–36), ix, pp. 22–23.

¹⁸ Maqrīzī (1934–72), ii pt. 3, p. 618; Ibn Taghrībirdī (1909–36), x, p. 70.

daftar of 1596 also provides evidence of the fiscal worth of livestock rearing. For instance, in *nāhiya* al-Salt the largest fiscal units are those of the 'urbān Banū Ṣakhr wa Karīm, and 'urbān Na'īm amounting to 38,000 and 17,000 *aqja* respectively.¹⁹

Reports from the Ottoman period, and later by nineteenth-century Western travellers, indicate that bedouin were involved in both licit and illicit trade with the towns of Palestine and Jordan. An Ottoman document records that goods stolen from *hajj* pilgrims were subsequently sold to merchants in Khalīl by members of the Banū 'Aṭa' and the Banū Aṭiyya.²⁰ Another reports that a merchant from Jerusalem was brought to court for buying 'cloth, arrows and other merchandise' looted from the governor of Karak.²¹ Burckhardt provides information as to the products traded between the bedouin of central and southern Jordan and merchants from Syria and Palestine. These included animal hides, indigo, sumac leaves for dyeing leather, ostrich feathers for sale in Damascus, and plant ashes for the manufacture of soap in Nāblus.²² This type of low level economic activity would have occurred in earlier periods but, being beyond the control of the state, it is difficult to ascertain the impact of such activities on the economy of the region.

Balqā'

The lands of Balqā' are praised in Western and Arab sources for their fertility: 'a fair place which abounds with all manner of good things'.²³ The pasture lands were particularly valued by the local bedouin; a proverb recorded by the early nineteenth-century traveller Burckhardt during his visit to the region was '*mīthl al-Balqā' mā taltāqa*' ('there is no country like Balqā').²⁴ Khalīl al-Zāhirī, who served as governor of Karak in the 1420s, claims that the region contained in excess of 300 villages. This figure is probably an exaggeration, but other sources do

¹⁹ Hütteroth and Abdulfattah (1977), pp. 169–71 and maps. See also Oliphant (1880), pp. 129–30.

²⁰ Heyd (1960), p. 85 (citing Mühimme Defteri, vol. LXX, no. 260). See also Burckhardt (1822), p. 413.

²¹ Cohen (1989), p. 121 (citing, Jerusalem Muslim court archives, vol. XL, p. 65).

²² Burckhardt (1822), pp. 354–55, 392–93, 403, 405, 411; Volney (1959), pp. 347–48; Ashtor and Cavidalli (1983).

²³ Sanudo (1972), III.14.3 (p. 246). See also Abū al-Fidā' (1840), p. 247.

²⁴ Burckhardt (1823), p. 368. See also Rogan (1999), pp. 27–29.

attest to the ability of Balqā' to support a large sedentary agricultural population.²⁵ While some money was probably generated from the limited mineral reserves of the region, it was the agricultural yield and the livestock of the plains of Balqā' which were of greatest significance for the economy of the Middle Islamic Levant.

Muqaddasī (d. 990) writes that the principal products exported from 'Ammān were grain, sheep and honey.²⁶ The fine quality of the wheat (*hintā*) harvested in the fields around 'Ammān was also noted by Yāqūt.²⁷ The quantity of grain produced in Balqā' at the end of the twelfth century is revealed in one account. In 1192 an arrangement was made for 16,000 sacks of wheat to be sent annually from Salt and the Balqā' to Jerusalem.²⁸ Traded in the Mediterranean in the fourteenth century, the cotton of 'Ammān was reputed to be the best in Syria.²⁹ Several other items of much smaller economic significance were exported from the region. Documents from the Geniza archive dating to the twelfth century mention the sale of wax from Balqā'.³⁰ Ibn al-Ukhuwwa (d. 1329) writes that 'Ammān was the only place in Syria where *al-rāwand al-shāmiyy* (a medicinal root used for the treatment of liver inflammation in horses) was found.³¹ Shayzarī (fl.12th) records that Balqā' contained a type of tree from which gum (*al-muql*) was collected.³²

There is also some evidence for the limited exploitation of mineral reserves in this region and in the lands north of the Wādī Zarqā'. Survey work at Mugharat al-Warda and Abū Thawab found evidence of iron smelting. The majority of the shards gathered around the sites were dated to the Ayyubid-Mamluk period.³³ Mining and the trade in metal were controlled by the government in the Mamluk period, and so it seems likely that this was a state-sponsored exercise.³⁴ The exploitation of iron reserves was also recorded around 'Ajlūn from the

²⁵ Khalīl al-Zāhirī (1894), p. 46; *Hudūd* (1937), p. 151; Yāqūt (1866–70), I, p. 728. For the nineteenth century see comments in Abujaber (1997).

²⁶ Muqaddasī (1877), p. 180.

²⁷ Yāqūt (1866–70), I, p. 728.

²⁸ Bahā' al-Dīn (1969), p. 300.

²⁹ Pegolotti (1936), p. 366.

³⁰ Goitein (1967–93), I, p. 125.

³¹ Ibn al-Ukhuwwa (1938), p. 118 (Arabic text); Ibn al-Bayṭār (1874), II, p. 131.

³² Shayzarī (1948), p. 44 (and n. 5).

³³ Coughenour (1976), pp. 73–74.

³⁴ Qalqashandī (1913–18), IV, p. 188. See also Lapidus (1967), p. 67; Ashtor (1976), p. 114.

Ayyubid period.³⁵ Red ochre (*al-ṣaghra*) was mined in small quantities near to ‘Ammān.³⁶

Some mercantile activity and specialised cultivation occurred in the towns of Balqā’. Muqaddasī writes that ‘Ammān had water-driven mills (*s. raḥan*) and a *sūq* next to the mosque. He adds that prices were cheap and fruit was abundant.³⁷ Abū al-Fidā’ notes that ‘Ammān had magnificent ruins and the surrounding area contained many terebinth trees and trees of other kinds (*bihā ashjār buṭm wa-ghayrihā*).³⁸ Salṭ exported pomegranates and contained gardens producing other fruits.³⁹ Ḥasbān is described as having trees, watermills, gardens and cultivated fields.⁴⁰ Some towns of Balqā’ were the beneficiaries of trade with the *hajj* from Syria. Zīza’ was one of the stops on a pilgrimage route and contained a pool of water (*birka*) and a *sūq* where travellers could buy provisions.⁴¹ Zarqā’ is also mentioned by Abū al-Fidā’ as a stop on a *hajj* road.⁴²

In the *daftar-i jadīd* of 1596 Balqā’ region was located in the administrative district of *nāhiya* Salṭ in the *liwā’* of ‘Ajlūn. The overall picture created by the information in the records for Balqā’ is one of decline from the levels of prosperity in relation to the descriptions of the region from the fourteenth and fifteenth centuries. The revenues accruing to *pādīshāh*, *mīr liwā’*, *za’āma* and *tīmār* and *waqf* from the settled population were minimal. Of the small number of villages mentioned Ḥasbān, Mushrifā, Qal’a and Kafr Almā are described as deserted (*khālī* or *kharāb*) and only a fixed total of expected income is given.⁴³ This is also in contrast to the higher population levels recorded in the *c.* 1538 *daftar*. According to this earlier survey, all of the villages cited above (with the exception of Qal’a, which does not appear—or at least, not

³⁵ Coughenour (1976), p. 74 (citing Miller, ‘Ayyubid Iron Industry in the ‘Ajlūn District, Jordan’, [M.A. thesis, Institute of Archaeology]).

³⁶ Muqaddasī (1877), p. 184; Yāqūt, (1866–70), iii, pp. 719–20.

³⁷ Muqaddasī (1877), p. 175.

³⁸ Abū al-Fidā’ (1840), p. 247; Qalqashandī (1913–18), iv, p. 106.

³⁹ Abū al-Fidā’ (1840), p. 245; Qalqashandī (1913–18), iv, p. 106. Burckhardt (1822), p. 350: the author relates seeing merchants from Nazareth, Damascus, Nablus and Jerusalem in the town. Grapes from Salṭ were dried and exported to Jerusalem. See also Irby and Mangles (1823), p. 321.

⁴⁰ Abū al-Fidā’ (1840), p. 227.

⁴¹ Yāqūt (1866–70), ii, p. 966; ‘Abd al-Ḥaqq (1852–54), i, p. 526; Ibn Baṭṭūta (1853–58), i, pp. 255–57. See also Doughty (1921), p. 19.

⁴² Abū al-Fidā’ (1840), p. 227.

⁴³ Hütteroth and Abdulfattah (1977), p. 169–70; Bakhit and Hmoud (1991), p. 44 (also adding the name of a village called Umm al-‘Imad).

under that name—in the document) were occupied. Three deserted villages are recorded in the earlier survey (Bayt Rāma, Faḥl al-Taḥta and Faḥl al-Fawqā) although by 1596 these, and other villages in *nāḥiya* al-Salt, had been incorporated into the new *nāḥiya* Ghawr.⁴⁴ Allowing for these boundary changes a comparison of the two documents suggests a remarkable drop in the sedentary population in Balqā' over the course of less than seventy years from 511 households (s. *khāna*) and thirty single men (s. *mujarrad*) to 105 and seven respectively (and from twenty occupied settlements to four).⁴⁵ A widespread shift from sedentary to pastoral occupation may account for much of the apparent dip in population levels over this short period.⁴⁶

In the occupied villages the most important agricultural products were wheat and barley. The remainder consisted of smaller categories of olives and olive oil, 'goats and bees', fruit trees, summer crops, and 'occasional revenues'. In common with the majority of the fiscal units on the east side of the Ghawr, the villages of *nāḥiya* al-Salt were taxed at lower rate of 25% and the total income (in the 1596 *daftar*) derived from the villages ranges between 12,000 and 1,100 *aqja*, with a mean average of 4,688 *aqja*. The majority of the fiscal units are defined as tribal with the Banū Ṣakhr appearing in the documents as the dominant bedouin group. Although no details of estimated revenues can be found for the bulk of the *jamā'a* units, five (*urbān* Banū Ṣakhr *wa* Karīm, *urbān* Na'im, *urbān* Ṣumaydāt, *urbān* Banu Maḥdī and *urbān* Muḥammadīn) give fixed totals of 38,000, 17,000, 13,000, 4,000 and 2,500 *aqja* respectively. The first three figures are greater than for any of the villages of the *nāḥiya* and must have been derived largely from the raising of livestock.⁴⁷ The total revenue for the region was 112,000 *aqja*.⁴⁸

⁴⁴ Hütteroth and Abdulfattah (1977), pp. 167–69; Bakhit and Hmoud (1991), p. 43. Other villages in Balqā' may have been incorporated into the *nāḥiya* Banā 'Ilwān.

⁴⁵ Bakhit and Hmoud (1989), pp. 27–28; Hütteroth and Abdulfattah (1977), pp. 167–71. These figures should be viewed with considerable caution, however. The earlier *daftar* may have been utilising information from earlier Mamluk cadastral surveys. Further, it may be possible to assign some of the other villages (the transcription of the names from the original document being open to interpretation) in the 1538 *daftar* to the new *nāḥiyas* of Ghawr and Banā 'Ilwān.

⁴⁶ For a more detailed discussion of the state of the rural economy in this area, see Walker (2004b), pp. 131–33.

⁴⁷ Ibn Ṭūlūn (1962–64), I, p. 264: the author mentions that the Banū Ṣakhr were known for the rearing of sheep and horses. Burckhardt (1822), p. 368: he notes that Balqā' provided the best pasturage in the south of Syria.

⁴⁸ Hütteroth and Abdulfattah (1977), pp. 169–71 and maps. For the revenues from the tribes in the 1538 *daftar*, see Bakhit and Hmoud (1989), p. 44.

The *daftar-i hakkane* of 1892–1902 gives details of the ownership and reconstruction of watermills in the administrative region of Salt. The register contains twenty-nine such structures: eleven in ‘Ammān, eight in Wādī Sīr, three in Wādī Shu‘ayb, one in Wādī Ramill, two in Wādī al-Salt, one in Ḥasbān, two in Wādī Kharbar, and one in Rumaymin.⁴⁹ Eugene Rogan has shown that the cost of building or refurbishing a watermill was beyond the means even of local merchants unless they combined their financial resources. The costs of refurbishment could only be recouped after about three years of operation. It has not yet proved possible to find a satisfactory way of assigning absolute dates for the initial phases of construction for the numerous surviving Jordanian watermills.⁵⁰ If the majority of the mills listed in the nineteenth-century *daftar* were either newly constructed or, at least, continuously maintained in the thirteenth to fifteenth century, then this fact would correlate well with the picture of a populous and prosperous area described in the contemporary sources.

Karak Plateau

The Karak plateau (Arḍ al-Karak) was recognised throughout the period under discussion as possessing fertile arable land capable of supporting a large population. Khalīl al-Zāhirī notes that there were many villages on the plateau, though he does not provide a specific figure.⁵¹ The inhabitants were mainly involved in the production of cereal crops,⁵² but the raising of livestock also made an important contribution to the economy of the area. Muqaddasī found Ma‘āb, like the area around ‘Ammān, to contain trees and springs while ‘Umarī (d. 1347) notes the fertility of the area around the town of Karak.⁵³ Specialist crops

⁴⁹ Rogan (1995), p. 754: table 1. McQuitty (1995), p. 745: remains of watermills are identified by the author in the Wādī Ḥasbān. Burckhardt (1822), p. 355: the author mentions seeing mills south of Salt at ‘Ayn Ḥayzar. The Ḥasbān survey (Ibach [1987]) identified ten water mills dated to the Middle Islamic period.

⁵⁰ Rogan (1995), pp. 755–56. The date in the Burjī Mamluk period proposed by Rogan for the construction of the majority of these watermills does not seem likely given the weight of evidence for a decline in the levels of investment in the infrastructure of Bilād al-Shām at this time.

⁵¹ Khalīl al-Zāhirī (1894), p. 43.

⁵² A wider range of crops is reported in Cuinet (1896), pp. 48–50; Doughty (1921), p. 22.

⁵³ Muqaddasī (1877), p. 180; ‘Umarī (1988), pp. 237–38.

were produced in smaller quantities. Muqaddasī writes that many villages cultivated almonds and grapes, and that sugared almonds (*qalūb al-lawz*) were a speciality of Ma'āb.⁵⁴ The valleys beneath Karak were also noted for the cultivation of fruit. Abū al-Fidā' describes a *ḥammām* and many gardens producing fine fruits including apricots, pomegranates and pears.⁵⁵

The town of Karak, as the administrative centre of the plateau, enjoyed the benefits of the agricultural prosperity of the surrounding area. William of Tyre writes that, during the siege of Karak by Ṣalāḥ al-Dīn in 1183, the attackers found the houses of the town, 'well stocked with grain, barley, wine and oil'.⁵⁶ Describing the Frankish occupation of the town the Mamluk writer, Qalqashandī, claims that, 'they had markets and all the things needed for life were abundant'.⁵⁷ A French source probably mentions an annual fair at Karak.⁵⁸ A record from the Burjī Mamluk period provides an indication of the comparative wealth of Karak. As a reward to the inhabitants of the town for their support during his successful bid to regain the sultanate, sultan Barqūq exempted in perpetuity the town from taxes on houses, estates, gardens, and *waqfs* (a sum amounting to 17,000 *dirhams*).⁵⁹

No specific industry is mentioned in the town but there is evidence for limited manufacturing in some periods. For instance, siege engines were produced in Karak for campaigns against the Franks in the 1260s.⁶⁰ Wasters and a kiln tripod found in the Karak assemblage indicate that glazed and unglazed ceramics were manufactured in the town (see chapters 6 and 7). A document dated 781/1379 from the Ḥaram archive in Jerusalem mentions 'two Karak carpets (*bisāṭayn Karakī*)' in the endowment a group of artefacts for the Madrasa al-Ṭāziyya.⁶¹ Ulrich Seetzen, who visited Jordan in 1806, writes that a

⁵⁴ Muqaddasī (1877), pp. 178, 180.

⁵⁵ Abū al-Fidā' (1840), p. 247. See also Irby and Mangles (1823), p. 362.

⁵⁶ William of Tyre (1986), xxii.29.21–25 (trans. [1976], ii, p. 503).

⁵⁷ Qalqashandī (1913–18) iv, pp. 155–56.

⁵⁸ Perrier (1938), p. 38, ll.1200–1201.

⁵⁹ Duc de Luyne (1871–76), ii, p. 201, no. 19; *RCEA*, (1931–), xviii, no. 792.003. The right to collect tax from properties (*damān al-maghānī*) in Karak and Shawbak was revoked in 791/1388–89. See Ibn al-Furāt (1936–42) ix, p. 85; Ibn Taghribirdī (1909–36) v, p. 421.

⁶⁰ Ibn Abā al-Faḍā'īl (1916–20), ii, p. 542.

⁶¹ Little (1986), p. 87 (document no. 595). The *madrasa* contained the tomb of the amir Ṭāz who died in 1362. Carpets from Shawbak are also mentioned in this document (see below). The term *bisāṭ* is translated by Little simply as 'carpet'. It is not clear

cotton-like substance drawn from a tree in the Ghawr called *ʿawshīr* was spun into thick threads for the cleaning of gun barrels.⁶² Burckhardt notes the presence of some small craft industries although the bulk of the manufactured goods came from the towns of Palestine.⁶³ It seems unlikely that manufactured goods from the town were exported outside the plateau. There are occasional references to industrial activity in the remainder of Arḍ al-Karak. Yāqūt describes the production of swords of fine quality from Mu'ta, although the author may be referring to an earlier period.⁶⁴ Ibn Iyās (d. c. 1523) writes that in 1510 a mine of saltpetre (*ma'dīn al-barūd*) was found at an unnamed abandoned town (*balad kharāb*) near to Karak.⁶⁵ Whether this mineral deposit was ever exploited is not recorded.

Caravan routes passed through the Karak plateau and this traffic was of financial benefit to the inhabitants of the region. Lajjūn is mentioned as a stop on the eastern route to Mecca and Medina via Taymā'.⁶⁶ Ibn Baṭṭūṭa (d. 1377) records that caravans travelling to the Ḥijāz passed through Zīza', and then stopped at Thāniyya (about 4km east of Karak) for four days in order to buy provisions for the journey south.⁶⁷ In addition to the expenditure by the state on horses, camels, fodder and food for the pilgrims, private individuals made money from the sale of goods to the caravan. Robin Brown's analysis of the Middle Islamic pottery gathered on the Karak plateau by the Miller survey revealed further evidence of the economic importance of the King's Highway for the region. She found that the villages on either side of this road reported significantly higher percentages of wheelthrown and glazed pottery than other villages on the plateau.⁶⁸ This economic

from this description if knotted pile carpets or flat-weave rugs are being referred to. For further discussion of definitions, see Worrell (1934 and 1935).

⁶² Seetzen (1854–59) I, p. 422; Burckhardt (1822), p. 392.

⁶³ Burckhardt (1822), p. 388.

⁶⁴ Yāqūt (1866–70) iv, p. 677.

⁶⁵ Ibn Iyās (1960–74), iv, p. 204.

⁶⁶ Yāqūt (1866–70), iv, p. 351. For a discussion of the Middle Islamic material excavated at Lajjūn, see Brown (forthcoming).

⁶⁷ Ibn Baṭṭūṭa (1853–58), I, pp. 255–57. Field surveys at Thāniyya report concentrations of glazed and specialised unglazed ceramics suggesting that much of the trade with the annual *hajj* caravan was done at Thāniyya. See Brown (1992), pp. 410–11.

⁶⁸ Brown (1992), pp. 425–28, map 29. Another feature she noted was the concentrations of glazed and wheelthrown pottery at the towns of Rabba and Mu'ta, and the surrounding villages. This evidence would suggest that these towns operated as subsidiary markets to the main economic centre of Karak. See also comments in Brown (2000).

activity continued to be important to the region after the fall of the Mamluk sultanate. In the Ottoman period a tax was levied in the *nāḥiya* Karak upon trade with the pilgrimage caravan (*rasm bāzār qālifat ḥājjīyān*).⁶⁹ Commercial traffic passed through Arḍ al-Karak on its way from Cairo to Damascus and links of lesser commercial significance ran south of the Dead Sea connecting Karak with Khalīl, Gaza and other towns in Palestine.⁷⁰

The lands of *nāḥiya* Karak in the 1596 *daftar* included the Karak plateau, the east bank of the Dead Sea, and Ṭaffila. With the exception of the administrative capital of Karak, the fiscal units of the district were all defined as villages. Taxation was set at the lower rate of 25%. While the small number of registered settlements (fourteen including the *nafs* of Karak) means that the total revenue enjoyed by the *mīr liwā'* from the region was comparatively low, the level of revenues derived from individual villages in Karak was equivalent to many of the villages in the *liwā's* of Palestine. The income per village ranged from 1,000 to 25,000 *aqja*, with a mean average of 9,600 *aqja* (from a total figure for the *nāḥiya* of 134,400 *aqja*).⁷¹ The principal arable products were wheat and barley. Other categories mentioned were olives and olive oil, vineyards, fruit trees, 'summer crops', 'goats and bees',⁷² and 'occasional revenues'.⁷³ Four watermills were listed for the *nāḥiya* although the revenue derived from these was small ranging from 30 to 240 *aqja*.⁷⁴ Two other sources of revenue were mentioned in Karak which form an important proportion of the total income of 15,000 *aqja*: a market toll (*bāḥ bāzār*) of 2,500 *aqja*; and the treasury (*bayt al-māl*) of 4,000 *aqja*.⁷⁵

⁶⁹ Hütteroth and Abdulfattah (1977), p. 35.

⁷⁰ Qalqashandī (1913–18), xiv, p. 379.

⁷¹ Comparable figures for 1538 are given in Bakhit and Hmoud (1989), pp. 34–35.

⁷² Doughty (1921), p. 27: the author mentions that bees are kept by Christians in Wādī Zarqā', Wādī al-Karak and Wādī al-Mūjjib.

⁷³ Cf. M. Charles and C. Hoppe's archaeobotanical analysis of Middle Islamic occupation levels at Khirbat Fāris in McQuitty *et al.* (2000), pp. 194–98 and figs. 23–25. Plant types identified on the site comprise wheat, barley, bitter vetch, lentils, common pea, grass pea, broad bean, fig, pistachio, olive and grape.

⁷⁴ In the 1538 *daftar* three sites are noted as having watermills although the number of mills is only specified for one location (Irāq). The revenue from each appears to be small (only 30–40 *aqja*). See Bakhit and Hmoud (1989), p. 43. McQuitty (1995), p. 745: the author notes the remains of watermills in Wādī Ibn Ḥammad.

⁷⁵ Hütteroth and Abdulfattah (1977), pp. 171–72 and maps. Neither of these taxes is noted in the 1538 *daftar*. See Bakhit and Hmoud (1989), p. 43.

Brown also drew some interesting conclusions concerning the distribution of the sedentary communities of the region in the period from the sixteenth century. She noted that the types of undecorated handmade wares commonly associated with the Ottoman period in southern Jordan were found predominantly in the villages located in the highlands around the south and east borders of the Karak plateau. Brown concluded that in the sixteenth century the remaining rural population was clustered in these remote parts of the plateau because they provided better security against raiding by nomadic groups.⁷⁶ With the exception of the Ottoman *daftar*s for *liwā'* 'Ajlūn—which themselves may not be representative of the contemporary realities on the plateau—we possess very little textual evidence concerning settlement patterns from the sixteenth to the end of the eighteenth century. In view of this gap in the historical record, archaeological evidence has an important role to play in the study of settlement in the region during the Ottoman period.⁷⁷ It is worth emphasising, however, that the dating proposed by Brown for the coarse handmade pottery wares has yet to be confirmed through comparison to securely-dated excavated contexts on the Karak plateau, or elsewhere in southern Jordan.

Sharāt, Jibāl and South

The quality of the agricultural land south of the Wādī al-Ḥasā was recognised by the Crusaders when they founded the castle of Montréal. William of Tyre writes that, 'the spot has the advantage of fertile soil, which produces abundant supplies of grain and oil'.⁷⁸ Idrīsī (d. c. 1165) states that the towns of Sharāt and Jibāl possessed good soil and that vines and olive, almond, fig, and pomegranate trees can be found there.⁷⁹ Agriculture and livestock were the most important products of the region. In addition, the presence of trade and pilgrimage routes increased the economic activity of Sharāt and Jibāl.

⁷⁶ Brown (1992), pp. 440–42.

⁷⁷ For a discussion of this issue, see Johns (1995). For the evolution of settlement in the nineteenth and early twentieth century, see Rogan (1999).

⁷⁸ William of Tyre (1986), xi.26.30–33 (trans. [1976], I, p. 506). See also Jacques of Vitry (1611), xxviii (p. 1068).

⁷⁹ Idrīsī (1971–84), p. 357.

The construction of Montréal by Baldwin I appears to have been motivated principally by a desire to tax the caravans passing through that area on the journey from Cairo to Damascus. The raiding of merchants also proved to be a profitable undertaking.⁸⁰ Undoubtedly, the fertility of the province of Sharāt was another incentive for Frankish expansion. Arab sources contain numerous descriptions of the land around Shawbak. The Abbey of Mount Sinai owned mills, vineyards and olive groves around the town.⁸¹ Dimashqī writes that Shawbak was a fertile town with plentiful springs while Abū al-Fidā' adds that the gardens around the town produce apricots which were exported to Egypt.⁸² The gardens of Shawbak were particularly fine in the Ayyubid period due to the patronage of al-Mu'azzam 'Īsā, who brought trees from many other districts so that the area, according to Ibn Shaddād (d. 1285), came to resemble the gardens of Damascus.⁸³ In 1229 the Egyptian sultan al-Kāmil bought Shawbak and its surrounding lands from his cousin al-Nāṣir Dāwūd for the sum of 16,000 *dīnārs*.⁸⁴ In 1341 Aqṣunqur, *nā'ib* of Gaza, ordered 3,000 sacks of barley and 4,000 head of sheep be sent from Shawbak to Gaza.⁸⁵

Numerous references to carpets from Shawbak can be found in the late fourteenth-century documents in the Ḥaram al-Sharīf in Jerusalem. One document dated 790/1388 lists 'a pair of five-span Shawbak carpets (*zawj busuṭ Shawbakī khumāsī*)', 'a pair of Shawbak carpets (*zawj busuṭ Shawbakī*)', and 'five single Shawbak and Ḥawrān (*khamsa fardāt busuṭ Shawbakī wa Ḥawrānī*)' in the Madrasa al-Bārūdiyya in Jerusalem.⁸⁶ The Madrasa al-Ṭāz in the same city also contained a further four Shawbak *bisāṭs*.⁸⁷ Elsewhere in the estate inventories of Ḥaram documents there are references to further *bisāṭs*,⁸⁸ as well as cushions (s. *miq'ad bisāṭ*), and one *sajjāda* (possibly a prayer rug) from

⁸⁰ Albert of Aix (1967), pp. 702–703; Ibn al-Qalānisī (1908), p. 183.

⁸¹ Pringle (1993–), II, p. 305.

⁸² Dimashqī (1866), p. 213; Abū al-Fidā' (1840), p. 247.

⁸³ Ibn Shaddād (1963), p. 80; Qalqashandī (1913–18), IV, pp. 156–57. Mehmed Edib writes that foodstuffs from Shawbak were sent to Qatrāna to be sold to *hajj* pilgrims. See Mehmed Edib (1825), pp. 125–26.

⁸⁴ Bakhit (1997), p. 373.

⁸⁵ Maqrīzī (1934–72) II, pp. 599–600.

⁸⁶ Little (1986), p. 85 (document no. 76).

⁸⁷ Little (1986), p. 87 (document no. 595).

⁸⁸ Judging by the use of the term *sudāsī* ('six spans') in one document, some of the Shawbak carpets were of considerable length (much like the flat weave rugs still produced in the south of Jordan). See Little (1986), p. 89.

the Jordanian town.⁸⁹ Taken together, the evidence from the Jerusalem documents suggests that Shawbak was a significant producer of carpets in the south of Bilād al-Shām in the late fourteenth century. These rugs were presumably manufactured in and around the town from wool or goat hair gathered from local flocks. In the early nineteenth century Burckhardt noted the presence of merchants from Khalīl in Shawbak, and trading links between this region of southern Jordan and Palestine were probably well established in the Middle Islamic period.⁹⁰

Ṭafīla (Traphyla) was a fief during the Crusader occupation of Jordan but no specific details survive concerning the revenues derived from the crops and livestock.⁹¹ The agricultural produce of the site is not mentioned in the written sources of the Ayyubid-Mamluk period but the nineteenth-century traveller, Burckhardt, reports that Ṭafīla comprised 600 houses and was surrounded by plantations of apple, apricot, pomegranate, fig, olive, and peach trees. Figs from the town were dried and exported to Gaza.⁹² Towns and villages further south were also mentioned in the sources. Fulcher of Chartres writes that Wādī Mūsā was ‘very rich in the fruits of the earth’ and there was a spring which flowed sufficiently vigorously to power a mill for grinding wheat.⁹³ William of Tyre describes the fortress in the valley of Moses (perhaps Wu‘ayra) as surrounded by olive groves and similar reports can be found in Arab sources.⁹⁴ Burckhardt notes that the *sīq* at Petra was used as part of a caravan route between Ma‘ān and Gaza and the village at the head of the *sīq* was surrounded by fruit trees and contained many looms for weaving.⁹⁵ Dimashqī writes that Ma‘ān fulfilled an important role as a pilgrimage station (*manzila li ‘l-hujjān*) and contained a *sūq* for provisioning travellers.⁹⁶ In the eighteenth and nineteenth century the

⁸⁹ Lutfi (1985), pp. 61, 295; Little (1986), pp. 88–89.

⁹⁰ Burckhardt (1822), p. 417. See also Irby and Mangles (1823), p. 382.

⁹¹ *Regesta* (1893), no. 542; Pringle (1997), p. 98, no. 214.

⁹² Burckhardt (1822), p. 403; Libbey and Hoskins (1905), II, p. 19. A document dated 1861 in the Public Records Office (FO 195/675) describes Ṭafīla as the ‘more wealthy town beyond al-Karak’. Cited in Abujaber (1989), p. 125, n. 44. A recent field survey in the Ṭafīla region found that Middle-Late Islamic ceramics were found in numbers that are only exceeded by the levels seen in the Byzantine and Roman phases. See MacDonald *et al.* (2001), p. 406, table 8.

⁹³ Fulcher of Chartres (1913), II.5.8 (trans. [1969], pp. 146–47).

⁹⁴ William of Tyre (1986), XVI.6.27–30 (trans. [1976], II, p. 145); Yāqūt (1866–70), IV, p. 879; Qazwīnī (1967), p. 185.

⁹⁵ Burckhardt (1822), p. 427.

⁹⁶ Dimashqī (1866), p. 213. See also Ibn Baṭṭūṭa (1853–58), I, pp. 255–57.

town still grew a variety of fruit and goods were also imported from Gaza and Khalīl to supply the *hajj* caravan.⁹⁷

At the southernmost point of Bilād al-Shām is the port of Ayla/ʿAqaba. In the late tenth century Muqaddasī writes that the town was the port of Palestine and emporium (*khizāna*) of the Ḥijāz. He also notes that there were palm trees around the town and fish was caught from the sea.⁹⁸ While the natural resources of the town were sparse, the income derived until the mid eleventh century from the activities of the port was more considerable. Yāqūt states that in the tenth century an annual tax of 3,000 *dīnārs* was levied upon the town.⁹⁹ Ayla was heavily damaged in earthquakes of 1067 and 1071 and maritime traffic may have used other ports after this date.¹⁰⁰ Reconstruction of the port and the fortifications was carried out in the Ayyubid period, but the fortunes of Ayla waned after the eleventh century as goods from the Indian Ocean were diverted to ports such as Quṣayr Qadīm and ʿAydhāb. Although Ayla enjoyed a much reduced status in the Middle Islamic period, the annual passage of a proportion of the *hajj* pilgrims from Egypt through Naqb al-ʿAqaba must have injected some wealth into the immediate area through trade with the caravan.¹⁰¹ Evliya Çelebi reports that pilgrims travelling to the Holy Cities from Palestine journeyed down the west side of the Ghawr passing east at ʿAqaba.¹⁰²

In the 1596 *daftar* the land south of the Wādī al-Ḥasā was administered as the *nāḥiya* Jibāl Karak and the *nāḥiya* Shawbak in the *liwāʾ* ʿAjlūn. A tongue of land which included Taḥfīla extended south into Jibāl Karak but was administered by *nāḥiya* Karak. The regions were a mixture of villages and tribal units with Shawbak itself categorised as a town (*nafṣ*). All the fiscal units were counted as *mīr liwāʾ*. Revenues for both districts were dependent upon agriculture and livestock rearing. The only exceptions to this general pattern being the ‘occasional

⁹⁷ Mehmed Edib (1825), p. 127; Burckhardt (1822), p. 427. See also Doughty (1921), pp. 33–34.

⁹⁸ Muqaddasī (1877), p. 178.

⁹⁹ Yāqūt (1866–70), I, p. 423.

¹⁰⁰ Ibn Taghrībirdī (1909–36), II, p. 239; Maspero and Wiet (1919), p. 30; Whitcomb (1990–91), p. 44.

¹⁰¹ Ibn Khurdādhbih (1889), pp. 149–50; Iṣṭakhrī (1870), p. 27; Ibn Ḥawqal (1873), p. 34; Ibn Rustah (1892), p. 183; Yaʿqūbī (1892), pp. 340–41. See also Zayadine (1985), pp. 159–60; Popper (1955), p. 53.

¹⁰² Evliya Çelebi cited in Heyd (1960), pp. 76–77, n. 3.

revenues' levied in fourteen fiscal units, the poll tax (*jizya*) levied on the small Christian population of Shawbak, and the watermills listed in Shawbak and Shamit. The taxable income derived from the watermills was small in relation to the total per fiscal unit (120 from 14,000 *aqja* and 120 from 18,000 *aqja* respectively). Another mill was listed at Tāfila deriving a taxable revenue of 180 *aqja*. In the town (Shawbak) and the villages of *nāhiya* Jibāl Karak and *nāhiya* Shawbak the bulk of the revenues derived from the cultivation of wheat and barley and from 'goats and bees'. Olives, fruit trees and, in Jibāl Karak, 'summer crops' made up the remainder of the total. The towns and villages of the two regions give total revenues ranging between 18,000 and 1,500 *aqja* while the tribal units give a fixed total range between 5,500 and 2,000 *aqja* (six of the seven cited being above 5,000 *aqja*). The total revenue for *nāhiya* Jibāl Karak is 60,000 *aqja* with a mean average of 8,951 *aqja*. The total revenue for *nāhiya* Shawbak is 84,700 *aqja* with a mean average (excluding units where no fiscal information is given) of 5,647 *aqja*.¹⁰³ Large numbers of cattle and sheep were being reared in the region in the nineteenth century and the rearing of livestock was probably of similar importance earlier in the Ottoman period.¹⁰⁴

Khalīl/Hebron

Giorgio Gucci, who visited Khalīl in 1383, found the land around the town abounding with trees and fruits and resembling the countryside of Tuscany.¹⁰⁵ Barley and other cereal crops were cultivated and the surrounding land supported many villages.¹⁰⁶ The hills around the town were thickly forested, and according to Arculf (fl.7th) fir trees were cut and transported to Jerusalem to be sold for fuel.¹⁰⁷ Sources describe the presence of vines, olive, sycamore, terebinth, carob, fig, apple, and other

¹⁰³ Hütteroth and Abdulfattah (1977), pp. 172–74 and maps; Bakhit and Hmoud (1991), pp. 59, 80, 88. For the 1538 *daftar*, see Bakhit and Hmoud (1989), pp. 35, 41. See also comments in Bakhit (1997), pp. 373–74. Pringle ([1997], p. 76, no. 157) notes that some watermills survive in the valley east of the castle.

¹⁰⁴ Doughty (1921), pp. 38–39.

¹⁰⁵ Gucci in Frescobaldi *et al.* (1948), p. 123.

¹⁰⁶ Nāšir-i Khusraw (1881), pp. 99–100.

¹⁰⁷ Arculf II.10 (Tobler [1879–85], I, pp. 174–75); Bede IX (Tobler [1879–85], I, p. 224).

fruit trees.¹⁰⁸ Muqaddasī writes that grapes and apples were exported to Egypt, and other sources report that the majority of the fruit grown around Khalīl went this way.¹⁰⁹ These reports speak of a well organised agricultural area involved in a profitable export trade. Felix Fabri (d. 1502), who visited the area in the 1480s, describes a different picture, ‘within these dry-stone walls there once were gardens of vines, olives, oranges, pomegranates, and other good fruit trees, in whose stead there now grow thorns, nettles, thistles, briars, brambles, and other useless self-sown bushes’. He concludes that the valley of Khalīl, ‘would be exceeding fertile if it were cultivated’.¹¹⁰

Khalīl contained a citadel and a market.¹¹¹ There was also an animal-powered mill with multiple grinding stones to provide the great quantities of flour needed to feed the pilgrims.¹¹² Isaac ben Joseph ibn Chelo (fl.14th) reports that the Jews of Khalīl manufactured dyed cotton and glassware.¹¹³ While there were probably many other small industries operating in the Ayyubid-Mamluk period, it was glassware for which the craftsmen of Khalīl were famous.¹¹⁴ Documents from the Ḥaram al-Sharīf of Jerusalem record that glass from Khalīl was exported to Jerusalem in the 1380s.¹¹⁵ Jacob of Verona, writing in 1335, states that the town had many furnaces and that the products of these were sent in great quantities to all the lands of the sultan.¹¹⁶ Glass was being exported from the town in the nineteenth century but whether this represents a continuity of production through the Mamluk and Ottoman periods is unclear.¹¹⁷ Soap was manufactured in Khalīl in the eighteenth century.¹¹⁸

¹⁰⁸ Iṣṭakhrī (1870), pp. 57–58; Idrīsī (1971–84), p. 363; Abū al-Fidā’ (1840), p. 247; Fabri (1843–49), II, pp. 339–40.

¹⁰⁹ Muqaddasī (1877), p. 172; ‘Ulaymī (1876), p. 12; Ibn Ḥawqal (1873), pp. 112–13; Suyūfī (1982–84), II, p. 103.

¹¹⁰ Fabri (1843–49), II, pp. 340, 355 (trans. [1893], II, pp. 408, 423).

¹¹¹ Yāqūt (1866–70), II, p. 468; ‘Abd al-Ḥaqq (1852–54) I, p. 364.

¹¹² Nāṣir-i Khusraw (1881), pp. 103–104; ‘Ulaymī (1876), p. 21.

¹¹³ Isaac ibn Chelo in Adler (1930), p. 135.

¹¹⁴ Poggibonsi (1945), p. 58; Frescobaldi in Frescobaldi *et al.* (1948), p. 68; ‘Ulaymī (1968) I, p. 281.

¹¹⁵ Lutfī (1985), p. 296; Irby and Mangles (1823), p. 342; Seetzen (1854–59), II, p. 49; III, pp. 4–5.

¹¹⁶ Jacob of Verona (1895), p. 253.

¹¹⁷ Irby and Mangles (1823), p. 342; Seetzen (1854–59), II, p. 49; III, pp. 4–5; Volney (1959), p. 341.

¹¹⁸ Volney (1959), p. 341. Derelict soap factories are recorded in sixteenth-century *daftar*s. See Cohen and Lewis (1978), p. 113.

A curious story about a field near to Khalīl is repeated in several Western sources. An anonymous pilgrim of the twelfth century writes:

...in Hebron is that field whose earth is red, which earth is dug up and eaten by its inhabitants, and is exported to Egypt for sale, and bought as an exceeding precious drug, because it is said to be true that of this earth Adam, the first man, was made.¹¹⁹

The pilgrim Fretellus (fl. 12th) adds that the earth was also sent to parts of Arabia.¹²⁰ Descriptions of clay possessing medicinal properties from various sites in the Mediterranean are listed, for instance, in the work of Ibn al-Bayṭār (d. 1248).¹²¹ A document dated 1571 records the discovery of a deposit of saltpetre (*güherçile*) in Khalīl and that between five and ten cauldrons of the product were being produced daily for the manufacture of gunpowder.¹²²

The very substantial incomes of the *waqf* of the Ḥaram at Khalīl were derived from towns and villages all over Palestine.¹²³ Estimates of the total value of the *waqf* reach as high as 500,000 *dīnārs*.¹²⁴ Felix Fabri notes that the revenue of the hospital attached to the Ḥaram was 24,000 ducats.¹²⁵ In the 1480s two gifts of an estimated value of 10,000 and 12,000 ducats were sent by the sultan to the Cave of the Patriarchs.¹²⁶ The income from the *waqf* was spent on the upkeep of the religious buildings, and for the care and sustenance of pilgrims and the poor. Bread, oil, lentils, and raisins were provided for all pilgrims and many people were employed in the supply, cooking, and serving of these items.¹²⁷ According to one traveller, the bakeries produced 13,000 loaves each day.¹²⁸

¹¹⁹ Anonymous Pilgrims (1894), p. 37. See also John of Würzburg xxī (in Tobler [1974], p. 176); Theodoric (1976), xxxiv.12–14 (p. 39); Mandeville (1953), II, pp. 48, 264; Poggibonsi (1945), p. 58.

¹²⁰ Fretellus (1980), viii (p. 9). See also Fabri (1843–49), II, pp. 341–42.

¹²¹ Ibn al-Bayṭār (1874) III, pp. 108–113; Ibn al-Wardī (1766), p. 186. See also Hasluck (1929), II, pp. 682–83; Raby (1995), pp. 326–29.

¹²² Heyd (1960), pp. 137–38 and n. 3 (citing Mühimme Defteri vol. XII, no. 616; vol. XXXIII, no. 591).

¹²³ Heyd (1960), pp. 145, 167–68 (citing Mühimme Defteri, vol. VII, no. 2636; vol. XXXIV, no. 581). See also Hütteroth and Abdulfattah (1977), map: 'Regional *waqf* links'.

¹²⁴ Rabbi Meshullam ben R. Menahem in Adler (1930), p. 186.

¹²⁵ Fabri (1843–49), II, p. 350.

¹²⁶ Suriano (1949), pp. 149–50.

¹²⁷ Nāṣir-i Khusraw (1881), pp. 103–104.

¹²⁸ Rabbi Meshullam ben R. Menahem in Adler (1930), p. 185. See also Suriano (1949), p. 150.

In the 1596 *daftar* the *nāhiya* Khalīl formed part of the *liwā'* al-Quds. For the town of Khalīl itself the documents provide some evidence of the levels of economic activity. Various market taxes can be found in addition to those levied upon butchers (s. *qaṣṣāb*), shops (s. *dukkān*) and the public bath (s. *ḥammām*). One manufacturing process is specified and taxed: presses for grape syrup (pl. *rusūm mi'āṣara dibis*). The tax revenues from these groups came to a total of 22,112 *aqja*. Sundry items from the treasury (*bayt al-māl*) and dedications to the sanctuary in Khalīl amounted to 1,000 and 8,000 *aqja* respectively.¹²⁹

According to the *daftar*, the *nāhiya* Khalīl was more sparsely populated than the other districts of Palestine. All the fiscal units were defined as villages and the rate of taxation varies between 25% and 33.3%. Incomes were split between *pādīshāh*, *mūr liwā'*, *za'ama*, *tūnār*, and *waqf*. Of the crops, wheat and barley were the items which made up the bulk of the taxable revenue. The remainder of items comprised fruit trees, olives and olive oil, 'goats and bees', 'summer crops', vines, and 'occasional revenues'. The absence of mills in this region was perhaps because the processing of cereal crops was done within the town of Khalīl. The revenues per fiscal unit range from 900 to 20,000 *aqja*. The total revenue from the villages of *nāhiya* Khalīl is 207,682 *aqja* with a mean average of 6,923 *aqja*.¹³⁰

Jordan Valley and the Dead Sea Ghawr

The two valleys (*al-aghwār*) were famed in the Islamic period for their agricultural produce. Felix Fabri writes that the Jordan river irrigated the fields creating an area of comparable richness to that of the lands of the Nile.¹³¹ Muqaddasī states that the region contained villages, water, date palms, cultivated fields, and indigo.¹³² Descriptions of Jericho (Rīḥā) and Baysān are numerous in Arab and Western accounts and give some idea of the type of crops commonly grown on both banks of the Jordan valley. The descriptions describe indigo, dates, bananas,

¹²⁹ Hütteroth and Abdulfattah (1977), table on pp. 90–91. See also Cohen and Lewis (1978), pp. 112–16.

¹³⁰ Hütteroth and Abdulfattah (1977), pp. 122–24 and maps.

¹³¹ Fabri (1843–49), III, p. 138.

¹³² Muqaddasī (1877), p. 186. See also Iṣṭakhrī (1870), pp. 58–59; Ibn Ḥawqal (1873), pp. 123–24.

lemons, rice, sugar, perfumed plants (s. *rīḥān*), cereals, pomegranates, and grapes.¹³³

Probably the most important single crop of the Ghawr in the Middle Islamic period was sugar cane (*qaṣab al-sukkar*). Qalqashandī notes the cultivation of sugar in the valleys (*aghwār*) of Syria while Yāqūt writes that the villages of the Ghawr produced sugar of fine quality (*sukkar al-jayyid*).¹³⁴ Jacob of Verona describes the presence of plantations to the east and south of the Dead Sea, and the thirteenth-century author, Jacques of Vitry, records intensive sugar cultivation on the banks of the Jordan river and the Dead Sea.¹³⁵ The mills (s. *matbakh al-sukkar*) and presses (s. *mi'asara*) for processing of the cane into the various grades of sugar were also located in the Jordan valley.¹³⁶ Ruins of sugar mills (s. *tāhūn al-sukkar*) are reported by Burckhardt at Mazrā'a and numerous other sites have been identified in the Jordan Valley and Dead Sea area during modern archaeological surveys.¹³⁷ Sugar was a valuable export product, and the sugar of Karak region (*Cranco di Monreale*) was considered by the fourteenth-century Italian trader, Balducci Pegolotti, as the fourth best after that of Cyprus, Rhodes, and Syria. This report suggests that the sugar of the Ghawr was in high demand, but Qalqashandī notes that the sugar of Syria was more expensive than that of Egypt.¹³⁸ Sugar processing was still continuing in the Ghawr up until the end of the fifteenth century but it seems likely, given the overall decline of the Mamluk sugar industry during the Burjī period, that manufacture of sugar at this time was less extensive than in the thirteenth and fourteenth centuries.¹³⁹

¹³³ Muqaddasī (1877), pp. 162, 174–75, 180; Abū al-Fidā' (1840), pp. 236–37; Ibn Shaddād (1963), p. 136; Qazwīnī (1967), p. 95; Gucci and Frescobaldi in Frescobaldi *et al.* (1948) pp. 79, 134; Jacob of Verona (1950), pp. 51, 55; Poggibonsi (1945), pp. 72–76; Fabri (1843–49), II, pp. 60–67.

¹³⁴ Qalqashandī (1913–18), IV, p. 87; Yāqūt (1866–70), IV, p. 51. See also Ricoldo de Montis Crucis (1864), p. 109; Thietmar (1851), p. 38.

¹³⁵ Jacob of Verona (1950), p. 53; Jacques of Vitry (1611), LIII (pp. 1075–1076).

¹³⁶ Maqrīzī (1934–72), II, p. 435; Qalqashandī (1913–18), IV, p. 182; Yāqūt (1866–70), IV, p. 126. Thirty-two sugar mills of Ayyubid-Mamluk date have been located in the Jordan valley. See Hamarneh (1977–78), p. 19.

¹³⁷ Burckhardt (1822), p. 391; Ibrahim *et al.* (1975); Jones *et al.* (2000); Whitcomb in MacDonald (1992), pp. 113–18; Whitcomb suggests that some of the structures identified as sugar mills may have been used in the processing of indigo. Although plausible, there is no archaeological evidence to support this assertion.

¹³⁸ Pegolotti (1936), p. 363, and see pp. 296, 365; Qalqashandī (1913–18), IV, p. 182.

¹³⁹ Fabri (1843–49), II, p. 50; Ashtor (1981), pp. 112–20. Some of the villages of the Jordan valley may have continued to be prosperous into the late fourteenth century. Three villages—Nimrīn, Kafīrīn and Zarā'a—are mentioned as part of the *wāqf*

Zughar, located on the south bank of the Dead Sea, was a town of some economic importance. Fulcher of Chartres describes the place as a village, favourably situated and abounding with dates.¹⁴⁰ Dimashqī describes Zughar and Ṣāfiyya as the main towns of the Ghawr and notes that the surrounding area was like that of Iraq with fine water and cultivated land.¹⁴¹ Vines, figs, balsam, and indigo were also cultivated around Zughar,¹⁴² but it was the dates which received special praise. Iṣṭakhrī writes that the dates (called *anqilā'*) were the colour of saffron and were not bettered even by those of Iraq.¹⁴³ The extensive economic activity in the town led Muqaddasī to describe the town of Zughar as a 'little Baṣrā'.¹⁴⁴ Idrīsī describes small boats navigating the Dead Sea carrying dates and other produce to Rīḥā (Jericho) and other regions of Bilād al-Shām.¹⁴⁵ During the Crusader occupation there were other ports on the Dead Sea that were used for the transport of foodstuffs from southern Jordan to Palestine.¹⁴⁶ Economic activity in the Ayyubid and Mamluk dynasties around the south-east coast of the Dead Sea is confirmed by the significant concentrations of glazed pottery dating to the Middle Islamic period at Ṣāfiyya, Khirbat Shaykh 'Īsā, Fayfā' and Rujūm.¹⁴⁷

The Dead Sea and, to a lesser extent, the Jordan valley were also important for their mineral reserves. Many sources refer to the asphalt, also known as 'Jew's pitch' (*hummar* or *qafṛ yahūdī*), which was found around the sea.¹⁴⁸ *Hummar* was boiled down and smeared on vines,

for the mosque-madrassa complex of sultan Barqūq. Whether these villages were still involved in sugar processing at this time or how long into the fifteenth century this occurred cannot be judged from this documentary source, however. See comments in Walker (2004), pp. 123–24.

¹⁴⁰ Fulcher of Chartres (1913), II.5.4 (trans. [1969], p. 146).

¹⁴¹ Dimashqī (1866), p. 211.

¹⁴² Muqaddasī (1877), p. 180; Ibn Shaddād (1963), p. 67; Abū al-Fidā' (1840), p. 228; Mandeville (1953), I, p. 70; II, p. 283; Deschamps (1939), p. 49; Serjeant (1972), p. 119.

¹⁴³ Iṣṭakhrī (1870), p. 64; Ibn Ḥawqal (1873), pp. 123–24. See also al-Hamdānī (1884–91) I, p. 131.

¹⁴⁴ Muqaddasī (1877), p. 178. See also Ibn Ḥawqal (1873), pp. 123–24. In the Geniza documents Zughar is described as a way station for overland trade from India. The documents also mention the trade in sulphur and other goods. See Amar (1998), p. 5.

¹⁴⁵ Idrīsī (1971–84), p. 355.

¹⁴⁶ *Regesta* (1893), nos. 279, 551. See also Musil (1907–1908), I, pp. 170–71; King *et al.* (1987), p. 445.

¹⁴⁷ King *et al.* (1987); MacDonald (1992); Albright (1924), pp. 4–5, 8–9.

¹⁴⁸ Iṣṭakhrī (1870), p. 64; Ibn Khurdādhbih (1889), p. 79; Ya'qūbī (1892), p. 329; Dimashqī (1866), p. 121; Ibn al-Bayṭār (1874) IV, pp. 26–27; *Regesta* (1893), no. 174;

fig, and other trees as a means of aiding cultivation and as a protection from pests.¹⁴⁹ Burchard of Mount Sion (fl. late 13th) writes of the medicinal value of asphalt and Mas'ūdī (d. c. 956) describes the use of Jews' stone (*al-ḥajar al-yahūdī*) which was processed into a medicine for use against urinary complaints.¹⁵⁰ In the early twentieth century the archaeologist William Albright located asphalt wells at the south-west end of the Dead Sea.¹⁵¹ Naphtha and alum were also found in the Dead Sea valley.¹⁵² Sulphur (*kibrīt*) was mined both around the Dead Sea and near to Jericho.¹⁵³ According to Tamīmī (d. 938), rock salt collected from around the town of Zarā' by the Dead Sea was traded widely.¹⁵⁴ The collection of a type of salt (*milḥ manthūr*) is mentioned by Muqaddasī while Ibn Khurdādhbih (d. 912) says that the salt was used by jewellers (s. *ṣā'igh*).¹⁵⁵

Wādī Faynān is located on the eastern scarp of the Wādī 'Araba and is known to have been mined and smelted for copper from the Bronze Age to the Middle Islamic period.¹⁵⁶ Surveys of the wadi found small amounts of Middle Islamic pottery at Khirbat al-Nuḥās and shards dated to the Mamluk and Ottoman periods are reported all over Faynān, especially the cemetery areas. The survey team concluded that the copper was being smelted at this time.¹⁵⁷ A recent publication of coin finds from excavations and surveys allows for greater chronological precision.

Theodoric (1976), xxxv.10 (p. 40); Anonymous Pilgrims (1894), p. 39; John of Würzburg xxii (in Tobler [1974], pp. 178–79); Mandeville (1953), i, p. 71; ii, p. 283; Jacob of Verona (1950), p. 56.

¹⁴⁹ Ibn Ḥawqal (1873), pp. 123–24; Abū al-Fidā' (1840), p. 228.

¹⁵⁰ Burchard of Mount Sion (1896), p. 60; Mas'ūdī (1861–77) i, p. 97. Poggibonsi (1945), p. 74: the author relates that snakes from around the Dead Sea were boiled down to make a medicine.

¹⁵¹ Albright (1924), p. 9.

¹⁵² Fretellus (1980), xxiii (pp. 17–18).

¹⁵³ Muqaddasī (1877), p. 184; Abū al-Fidā' (1840), pp. 236–37. Tamīmī (Amar [1998], pp. 5–6) records that 'white sulphur' (probably calcium sulphate) and 'black sulphur' were mined from the springs around the Dead Sea. 'White sulphur' was sent as far as Damascus and Egypt. The dried stalks of common squill (*Urginea maritima*) were apparently dipped into the 'black sulphur' to create matches.

¹⁵⁴ Amar (1998), pp. 4–5. For other examples of the value of the trade in salt in Syria, see Ibn Shaddād (1953), p. 152; Yāqūt (1866–70) ii, p. 29.

¹⁵⁵ Muqaddasī (1877), p. 184; Ibn Khurdādhbih (1889), p. 79. The latter reference may be to borax.

¹⁵⁶ Hauptmann and Weisgerber (1987), pp. 419, 434. For the west side of the Wādī 'Araba, see Rothenberg (1999), pp. 163–69.

¹⁵⁷ King *et al.* (1989), pp. 202–204. Other Islamic smelting sites in the area are Furn, 'Ayn Fidān and, probably Wādī Dāna. See Khouri (1988), p. 126; King (1989); Knauf (1992), p. 782; Hauptmann and Weisgerber (1987), pp. 423–24.

This included a group of six coins dating between 600–32/1203–35 at al-Furn, 6km northwest of Wādī Faynān (no Islamic or Frankish coins of earlier date were recovered). The coins came from the vicinity of structures associated with the revival of copper smelting. This evidence appears to support the idea of state-sponsored copper extraction on the site during the Ayyubid period. The five Mamluk coins (dating 700–78/1300–76) from the hill of Khirbat Faynān may be associated with smaller scale copper smelting nearby, though the authors of the report allow that they may be from transient occupation of the site. They note that the low price of imported copper in the fourteenth century probably reduced the incentive to invest in smelting at Wādī Faynān.¹⁵⁸ It is possible that some of the industry in the Ayyubid and Mamluk periods was concentrated on extracting copper from earlier slag deposits. The logistical problems associated with provisioning workers and providing fuel for the smelting process in such a remote location suggest that state investment would have been required to sustain the industry during the phase of activity in the early thirteenth century.

In the 1596 *daftar* the recorded settlements on the east side of the Dead Sea were probably included in the *nāhiya* Karak in the *liwā'* 'Ajlūn. The east bank and the majority of the west bank of the Jordan valley between the Dead Sea and Lake Tiberias were administered as the *nāhiya* Ghawr in the *liwā'* 'Ajlūn.¹⁵⁹ *Nāhiya* Ghawr consisted of twenty-five fiscal units, all villages (four of which were deserted). The tax revenues were allocated to *pādīshāh*, *mīr liwā'* and *za'āma* and *tīmār*. In seven of the twenty-five the total income was divided between the holder and a *waqf*. Total income ranged from 500 to 12,500 *aqja* with a mean average of 6,195 *aqja* (from a total for the region of 154,887 *aqja*). Wheat and barley were the most economically important products of the Ghawr. The other common sources of revenue were 'summer crops', olives and olive oil, vineyards, fruit trees, 'occasional revenues', 'goats and bees', and water buffalo. Rice and indigo were cited as specialist crops, while the mining of sulphur was noted in Mukhayba (worth 2,000 from a total of 5,425 *aqja*). The low income derived from the seven watermills (between 120 and 180 *aqja*) makes it unlikely that

¹⁵⁸ Kind *et al.* (2005), pp. 179, 181, 188–89. See also Hauptmann (2000), pp. 86–87, fig. 62.

¹⁵⁹ The *nāhiya* Ghawr does not appear in the 1538 *daftar*. The east bank of the Jordan river formed part of *nāhiya* Salt. See Bakhit and Hmoud (1989).

they were being used for the processing of sugar cane.¹⁶⁰ The absence of references to sugar in the *c.* 1538 and 1596 *daftar*s suggests that this industry had ceased to function in the Ghawr, although recent excavations at the site of Ṭawāḥīm al-Sukkar at the south end of the Dead Sea have indicated that at least one mill continued to function into the first decades of Ottoman rule.¹⁶¹ The revenues for the whole district seem rather modest bearing in mind the descriptions of the prosperity of the Ghawr in earlier sources.

¹⁶⁰ Hütteroth and Abdulfattah (1977), pp. 167–69 and maps; Bakhit and Hmoud (1991), pp. 57, 77.

¹⁶¹ Robin Brown, personal communication. On this project, see Jones *et al.* (2000).

CHAPTER FIVE

SUMMARY OF THE HISTORICAL EVIDENCE

Karak's role as a regional capital is clearly of fundamental importance to the analysis of the historical and archaeological records. The administrative status of Karak defined the nature of its relationship with the surrounding lands of central and southern Jordan, as well as with other centres of government and commerce in Bilād al-Shām and Egypt. For much of the Middle Islamic period Karak was the administrative centre for the lands south of the Wādī Zarqā' including the east and south banks of the Dead Sea and the southern section of the eastern Jordan valley. At times the administrative region of Karak included Khalīl in the south and Nāblus in the north. In the period *c.* 1100–1650 central and southern Jordan was a productive agricultural region with some limited mineral resources and manufacturing capacity. The written sources also indicate that livestock rearing formed a significant part of the economy. The Karak plateau and Balqā' were populous from the late twelfth to the early fifteenth century. Sharāt and Jibāl were probably more sparsely settled.

The picture after 1500 is more difficult to discern. A continuity of settlement seems likely on the Karak plateau until at least *c.* 1600 though much of Balqā', and perhaps the areas south of the Wādī al-Ḥasā' reverted to more nomadic occupation before the end of the sixteenth century. The period after *c.* 1650 is characterised by lower levels of sedentary occupation,¹ although the descriptions of the lands east of the Ghawr as an area virtually devoid of permanent settlement made by nineteenth- and early twentieth-century travellers require revision.² The fertility of the lands of central and southern Jordan and the continuity of settlement in the period *c.* 1100–1500 meant that the area usually produced an agricultural surplus. The desire to exploit this agricultural region is an important reason for the interest shown by the political dynasties of the Levant in the Middle Islamic period.

¹ Archaeological surveys indicate that the sedentary population of the Karak plateau was clustered in villages in the highlands on the south-western flank of the plateau in the Ottoman period. See Brown (1992), pp. 440–42.

² Johns (1995), pp. 1–3, 25–29.

The discussion of the political history (chapter 2) emphasised the importance of the location of Karak and the defensive strength of the castle. While the strategic significance of the castle varied according to the wider political developments, factors that remain important throughout the Middle Islamic period are: the proximity of the castle to the King's Highway, a major road from Damascus to Cairo as well as principal pilgrimage route from Syria to Mecca and Medina; the position of Karak on the frontier of the southern part of the Badiya al-Shām; and the commanding position the castle enjoyed over the route around the south end of the Dead Sea into Palestine. In addition, the castle was utilised as a point of liaison with powerful bedouin tribes. Whenever any of these considerations was paramount to the policies of central government in Cairo, Damascus or Jerusalem, correspondingly political and economic activity on the site became more intense.

The discussion in chapters 2, 3, and 4 also highlighted the towns and areas outside of central and southern Jordan that were most significant in the economic and political development of Karak. The most important relations were with the south of Bilād al-Shām. To the west the Palestine coast connected Karak and the surrounding regions with the trade networks of the Mediterranean. To the north Damascus was the most important influence on Karak and probably acted as the mediator of much of the international trade in Bilād al-Shām. The political and economic life of northern Syria appears to have had little effect on the historical development of the lands south of the Wādī Zarqā' in the Middle Islamic period. To the south there is little evidence to suggest any great degree of political and economic interaction between Karak and the cities of Mecca and Medina, though Karak remained important because it controlled a vital stretch of the *ḥajj* route leading to Syria. There are also occasional examples in the thirteenth and fourteenth centuries of troops being sent from Karak to Arabian *ḥajj* forts such as Khaybar. What is much more significant is that Karak represented the point where the relationship of the state and the powerful bedouin tribes of southern Jordan and Arabia was mediated. The link between Cairo and Karak was most powerfully expressed in the Bahrī Mamluk period, particularly during the reigns of al-Nāṣir Muḥammad ibn Qalāwūn and his sons, but was of less importance for the remainder of the Middle Islamic period. At other times, Cairo's direct interest in the region did not extend beyond the appointment of governors and other high officials. This lack of regular connection appears to be confirmed in the archaeological record;

there is little archaeological or historical evidence for the consumption of Egyptian manufactured goods in Karak or elsewhere in central and southern Jordan.

Both the administrative status and the extent of the lands controlled by Karak fluctuated during the Middle Islamic period. The territories of Frankish Oultrejordain were most extensive in 1161 at the beginning of the lordship of Philip of Nāblus. In the Ayyubid period the lands of al-Mu‘azzam ‘Īsā comprised most of the south of Bilād al-Shām although the main administrative centre during his rule was Damascus not Karak. Under al-Nāṣir Dāwūd Karak was the centre of a large principality that took in the Jordan valley, Khalīl and most of the regions east of the Jordan valley, Dead Sea Ghawr and the Wādī ‘Araba. The *mamlaka* of Karak controlled the same area in the early Mamluk period with the exception of the west side of the Jordan valley but the control of Khalīl, Balqā’, and the Jordan valley was lost during the course of the fourteenth century. The extent of the administrative region was further diminished in the early Ottoman period. What remains fairly consistent through the Middle Islamic period, however, is that Karak administered all the lands south of the Wādī al-Mūjib. Beyond this area, long-term economic and political relations can be discerned with Khalīl in Palestine and the smaller settlements of Ḥasbān and ‘Ammān in Balqā’. Politically, the most significant phases were those when Karak was the capital of an independent political unit (a Crusader lordship or Ayyubid principality) or the centre of a large administrative region (a *mamlaka*). It was during these phases that the numbers of military and bureaucratic elite in the castle were at their greatest. The castle was chosen to function as a treasury, arsenal, prison, and meeting point between the sultan and the bedouin. In addition, officials were required for the smaller regional centres of central and southern Jordan such as Shawbak, Ḥasbān and Salt.

The written sources provide only a partial picture of the levels of investment through the Middle Islamic period, but it is possible to identify some peaks of activity. The period from 1116 to the completion of Karak castle in *c.* 1165 was a phase of intense construction work over central and southern Jordan. Corresponding levels of agricultural exploitation and mercantile activity are confirmed by the presence of *cours des bourgeois* in Karak and Shawbak and, perhaps, an annual fair in Karak. There was also investment in the development of trade routes across the Dead Sea. The Ayyubid period saw the greatest level of investment during the reign of al-Mu‘azzam ‘Īsā. Rebuilding is recorded

at Karak as well as other military installations such as Shawbak, Azraq and Salt during his rule but, equally important, was the investment in the transport infrastructure.³ The use of money and land gifts is attested in the Crusader and Ayyubid periods as a means to ensure good relations with the bedouin of the south of Bilād al-Shām. Archaeological evidence also points to the revival of copper smelting on the western side of the Wādī ‘Araba.

The early Mamluk period provides the largest body of evidence of state investment in central and southern Jordan. Karak and Shawbak castles were both extensively rebuilt under Baybars and subsequent sultans. The town of Karak was remodelled during the rule of al-Nāṣir Muḥammad, a development presumably related to the frequent visits by the sultan and his children. Less significant additions are recorded in the latter part of the fourteenth and early fifteenth century. The governorship of Baybars al-Manṣūrī in the 1280s included a scheme to revitalise the agriculture of the *mamlaka*, and other similar initiatives may have occurred in the remainder of the Bahārī Mamluk period. There was also extensive investment in the sugar industry in the Dead Sea and Jordan valleys by the sultans, amirs, and merchants (though by c. 1300 the sugar mills in the Jordan valley were probably managed from Damascus). Transport and communication networks in the region, and in the entire Levant, were improved by Baybars and his successors.⁴ Bedouin were encouraged, through the combination of gifts and the threat of military force, to keep highways safe and provide surveillance of the eastern borders of the empire. Investment in central and southern Jordan declined in the second half of the fourteenth and fifteenth centuries. A few minor efforts were made to revive the agricultural economy in the early Ottoman period, but the majority of the investment was directed towards keeping the highways through the region passable.

Descriptions of the territories controlled by Karak from the thirteenth to the early fifteenth century create a picture of a populous and productive region. The twelfth-century Spanish traveller, Ibn Jubayr, estimates that the region of Karak contained 400 villages while, in the second quarter of the fifteenth century, Khalīl al-Zāhirī claims 300 villages

³ See more detailed discussion of this period in Milwright (2006a).

⁴ Sauvaget (1941).

in Balqā' alone.⁵ Some accounts give an indication of the monetary value of the whole region in the Middle Islamic period. During the negotiations between sultan al-Kāmil and the Crusader forces holding the port of Damietta in 1218–19, a sum of 30,000 besants/*dīnārs* (or 15,000 besants/*dīnārs* per annum for an unspecified period of time) was offered to compensate for the omission of Karak and Shawbak from the list of objects and land to be restored to the Franks.⁶ According to Oliver of Paderborn, the reasons for the refusal were both strategic and economic in nature.⁷ 30,000 *dīnārs* would seem to be a low valuation of the income for the region; for instance, Khalīl al-Zāhirī states that the income of the governor (*nā'ib*) in the 1430s amounted to 10,000 gold *mīthqāl* per month.⁸ It is also likely that the post offered opportunity for considerable financial gain; under Mamluk and Ottoman rule there are cases of individuals making payments to the state in order to have control of the governorate of Karak.⁹ Under the Ottomans, the competition for the post of *mār līwā'* was probably stimulated by the large sums paid by the treasury in Damascus to those involved in providing safe passage, food, and animals for the annual Syrian and Egyptian *hajj* caravans passing through the region.

Cereal cultivation was the principal economic contribution of the inhabitants of Balqā', though specialised crops are reported in some sources around the towns of 'Ammān and Saḷḷ. The presence of markets suggests some level of commercial exchange, and the large number of watermills (both those reported in the *daftars* and those located during archaeological surveys) may indicate some state investment in the region in the Ayyubid-Mamluk period. By the end of the sixteenth century, the levels of sedentary occupation decreased dramatically, and it seems likely that this process can be traced earlier to the fifteenth century.¹⁰ The most important activity of the region at this

⁵ Ibn Jubayr (1907), p. 287; Khalīl al-Zāhirī (1894), p. 46.

⁶ Ibn al-Dawādārī, vii (1961–92), p. 209; Abū al-Fidā' (1967), p. 97; Ernoul (1871), pp. 417, 464; *L'Estoire* (1967), pp. 340–42.

⁷ Oliver of Paderborn (1894), iv.31 (trans. [1971], pp. 84–86).

⁸ Khalīl al-Zāhirī (1894), p. 132. Obviously, it is dangerous to compare two financial estimates made two centuries apart; some of this disparity can be accounted for by the periods of inflation (particularly in the late fourteenth and early fifteenth centuries) that devalued the *dīnār*. For fluctuations in the value of the *dīnār* during the later Mamluk period, see Bacharach (1973).

⁹ Ibn Taghribirdī (1954–60) v, p. 157; vi, pp. 89–90, n. 253; Abu Husayn (1985), p. 170 (citing Mūhimme Defteri, vol. lxxvii, pp. 390–91).

¹⁰ For evidence of relative prosperity of some parts of Balqā' in the late fourteenth century, see Walker (2004), pp. 123–24.

time was the raising of livestock by the Banū Ṣakhr and Banu Naʿīm. The general picture created by the written sources is largely confirmed by recent archaeological work. Thirteenth- and fourteenth-century occupation phases are reported at ʿAmmān,¹¹ Dhibān,¹² Ḥasbān,¹³ ʿIrāq al-Amīr,¹⁴ Khirbat Duḥāla¹⁵ and Mādabā,¹⁶ but subsequent phases are characterised by lower levels of glazed pottery or even a complete absence of sedentary occupation. The archaeological evidence confirms a widespread shift to pastoral nomadism in the fifteenth and sixteenth centuries.

The Karak plateau from the twelfth to fourteenth century is also described as populous and providing fertile land for cereal crops. Fruits were cultivated in the sheltered valleys and livestock was reared to the east of the district. Karak operated as the economic centre of the region with regular markets as well as trading links with the Ghawr, Palestine, and the south of Syria. While Karak continued as the economic centre in the early Ottoman period, levels of sedentary occupation decreased elsewhere on the plateau. The economy of the southern regions of Sharāt and Jibāl was also dominated by agriculture and livestock rearing. ʿAqaba/Ayla ceased to operate as a major port by the mid-eleventh century, and the only recorded items of inter-regional trade from the region south of the Wādī al-Ḥasā were fruit and flat weave rugs. Shawbak, and perhaps also Tāfila, operated as the market towns of the region; both, however, retained a secondary status to that of Karak to the north. Further south, Maʿān and ʿAqaba/Ayla took advantage of trade with the annual *ḥajj* caravans from Syria and Egypt respectively. The number of settlements in the *nāḥiyas* of Shawbak and Jibāl Karak was small by the sixteenth century, though the average revenue per village was similar to those of *nāḥiya* Karak. Evidence from the nineteenth century suggests that traders from towns in Palestine did travel to this region in order to buy simple manufactured items from the local population. This may represent a more lasting economic relationship that has not been recorded in the written sources of the early Ottoman period.

¹¹ Bennett (1979).

¹² Tushingham (1972); Sauer (1975).

¹³ Sauer (1973).

¹⁴ Brown (1979 and 1983).

¹⁵ Sārī (1992a and 1992b).

¹⁶ Herr (1991); Piccorillo (1994).

The region around Khalīl was extensively cultivated in the Middle Islamic period. Numerous fruit crops are attested and some of these were exported to Egypt and elsewhere. The anecdotal evidence provided by Felix Fabri suggests that this specialised agricultural sector was largely moribund by the 1480s, but it may have revived in the Ottoman period. The presence of large numbers of pilgrims to the Tomb of the Patriarchs stimulated trade and industry in the town. In the Ayyubid-Mamluk period Khalīl was a centre for manufacturing industries such as dyed cloth and glass. No mention of these industries appears in the *daftar* of 1005/1596 even though this document does provide abundant evidence of continuing agricultural productivity in the countryside. The revenue of the *nāhiya* al-Khalīl was larger than any *nāhiya* in central and southern Jordan. Excavations in Khalīl produced a wide range of wheelthrown, glazed, and decorated pottery in Middle Islamic contexts, attesting to the high levels of economic activity in the town.¹⁷

The resources of the Jordan valley and Dead Sea Ghawr were more varied than those of the plains of central and southern Jordan. The exploitation of mineral products is reported through the Middle Islamic period and trade across the Dead Sea is noted in some written sources of the twelfth century. Numerous specialised crops were grown in the region. Most important was the cultivation of sugar; archaeological surveys have identified mills in both the Jordan valley and Dead Sea Ghawr. The industry was most extensive in the thirteenth and fourteenth centuries. No sugar cultivation is mentioned in the records for the *nāhiya* Ghawr in 1596 although other forms of cultivation (mainly cereal and pulse crops) do appear. The average revenue per settlement was lower than in the *nāhiyas* of central and southern Jordan, but the total revenue for the district was higher. Surveys around the south and east banks of the Dead Sea reveal a prosperous group of communities involved in agriculture, sugar processing, inter-regional trade, and the manufacture of glazed pottery in the twelfth-fourteenth century.¹⁸ Levels of economic activity probably declined in the fifteenth century due to the breakdown in security in the Ghawr and, perhaps more significantly, the reduction in investment in capital-intensive projects such as sugar refining.

¹⁷ Bennett (1972).

¹⁸ For instance, see King *et al.* (1987); King (1989); Whitcomb (1992).

The lands south of the Wādī Zarqā' were involved, to a limited extent, both in inter-regional trade with Palestine and the south of Syria and in international trade with Egypt and the Mediterranean. Export to Palestine was concentrated on raw and processed agricultural products, while manufactured items were imported into central and southern Jordan from Palestine and the south of Syria. Though the export of fruit from Shawbak to Egypt and Shawbakī rugs to Jerusalem is reported in the fourteenth century, the archaeological record for Sharāt and Jibāl suggests that the villages enjoyed very limited access to manufactured goods from other regions.¹⁹ Trade between the southern regions of Jordan and Palestine may have been mediated through Karak. Balqā' and the Jordan valley probably traded directly with Syria and the northern half of Palestine.²⁰ The King's Highway ensured access to manufactured goods from Syria and, to a lesser extent, Egypt. Evidence from field surveys suggests that proximity to the road stimulated higher levels of economic activity.

In general, the evidence from historical sources and the archaeological record indicates that there was a decline in the sedentary population and agricultural productivity of central and southern Jordan in the fifteenth and sixteenth centuries. This decline was most marked in Balqā' (perhaps because it had been the most populous in the thirteenth and fourteenth centuries), but the same reduction in sedentary occupation can also be traced elsewhere. While the raising of livestock by the nomadic population may have remained constant, the ability of the state to collect the revenues from this activity probably decreased after the sixteenth century. In addition to the decrease in the area of land under cultivation there was also a sharp decline in specialised agriculture. Sugar processing in the Ghawr appears to have been minimal at the end of the fifteenth century, and other reports of the Jordan valley and Khalīl suggest that the cultivation of fruit for export was much diminished. Specialised agriculture required greater levels of capital expenditure and available historical evidence suggests that landowners

¹⁹ A survey the area south of the Wādī al-Ḥasā' found that the ceramics of the Middle Islamic period were almost exclusively composed of locally-produced handmade pottery. This evidence suggests that, with the exception of local centres like Shawbak and Taffila, the inhabitants of this region were not consumers of wheelthrown and glazed wares from northern Jordan, Palestine, and Syria. See Hart and Falkner (1985).

²⁰ Kareem (1992 and 1998).

in Syria were less willing to invest in such projects in the second half of the Mamluk period.

According to the *daftars* of the sixteenth century both the number of settlements and the income per *nāhiya* were consistently higher in Palestine than in central and southern Jordan. For a number of political and demographic reasons the revenues from central and southern Jordan probably declined more sharply than in Palestine during the sixteenth century, but it is likely that the information contained in the *daftars* reflects a more lasting disparity between the territories east and west of the Jordan valley and Dead Sea Ghawr. On the eastern side the towns were small and did not contain manufacturing industries capable of producing goods for inter-regional trade (with the exception of the sugar industry and, of lesser importance, the rugs of Shawbak). Consequently, central and southern Jordan remained dependent on the urban centres of Palestine and Syria for specialised ceramics, glass, metalwork, woodwork, and textiles. In view of the historical and archaeological evidence, it would be unwise to overemphasise the level of economic development within central and southern Jordan in the period *c.* 1100–1500. The principal economic significance of the region was as a producer and exporter of raw and processed agricultural produce.

PART TWO

THE MIDDLE ISLAMIC CERAMICS FROM KARAK

CHAPTER SIX

UNGLAZED CERAMICS

Introduction

Chapters 6 and 7 analyse the Middle Islamic ceramics recovered from Karak by the Department of Antiquities of Jordan and the Miller survey (see below). The Karak assemblage has divided into categories (wares) according to aspects of ceramic preparation, firing, method(s) of construction, and surface treatments. A shard count for each ware (total in the assemblage, and by find location: areas A–F) is given in each case in the footnotes, though it should be noted that the numbers and percentages quoted are meant to provide only a broad profile of the pottery wares in the Karak assemblage.

The discussion of the pottery in the Karak assemblage concentrates upon providing the dating information (drawn from other excavations on the Karak plateau and elsewhere) and the distribution of each ware in Bilād al-Shām and, more widely, in the eastern Mediterranean region. The distribution is divided accordingly: the distribution within Karak (areas A–F) is presented in the introductory comments to each section. In the discussion of each section, the distribution on the sites (from surveys and excavations) of the Karak plateau is given first and the distribution on other sites in Bilād al-Shām and elsewhere second. The distribution analysis is aimed at establishing the economic spheres of interest in which the site operated in the Middle Islamic period. The remainder of this introductory section is devoted to a brief presentation of the circumstances in which the Karak assemblages were found and of the methodology employed during the Miller survey.

The assemblage of ceramics from Karak consists of just over 8,200 shards gathered from within the citadel, on the slopes around its walls, and in sectors beyond the boundaries of the old town walls (pls. 4 & 5). Area A is an unstratified deposit of ceramic, glass, and plaster fragments discovered inside the Mamluk keep at the south end of the citadel. This material was discovered during clearance work in the

castle by the Department of Antiquities of Jordan.¹ Area F is also a secondary deposit, perhaps from clearance of the keep. Areas B–E are made up of pottery shards from field surveys around the walls of the castle, gathered as part of the Miller survey of the Karak plateau in the 1980s. The survey area around the walls was split into zones: the west slope (area B); the west side from the Government Resthouse (located just to the north of the modern entrance to the castle) to Burj al-Zāhir (area C); the east slope (area D); and the south slope (area E).² Like area A, area F is an unstratified deposit found in the south keep of the citadel by the Miller survey.

The Karak assemblage as a whole contains a wide variety of handmade, wheelthrown, relief-moulded, glazed and decorated pottery dateable to the Middle Islamic period. The unstratified deposits (A and F) constitute the largest proportion of the total assemblage.³ Analysis of the pottery in areas A and F revealed a statistically minimal contamination (*c.* 0.075%) of shards dating to the Roman and Byzantine/Early Islamic periods. The majority of the ceramics can be dated *c.* 1150–1520, with small numbers of Ottoman tobacco pipes, reduction-fired grey wares, and modern porcelain also present in the assemblage.

Both areas A and F were located in the Mamluk keep, though in the case of area A it is clear that this material was a secondary deposit. Handwritten notes found with the pottery in area A mention clearance work in 1974 and 1975, possibly near the entrance of the castle, undertaken by the Department of Antiquities. In other words, there exists no solid basis on which to locate the area (or areas) of the citadel from which this material in area A was gathered. At best, one can point to the rarity of diagnostic shards which can be securely dated before *c.* 1200 to suggest that most of the material probably belongs to occupation phases of the Ayyubid and Mamluk periods.⁴ This dating is confirmed by the strong correlations between the pottery in areas A and F and the finds from the one controlled excavation carried out

¹ The material from area A is stored by the Department of Antiquities in Karak castle.

² Iliff and Brown (1991). The ceramics gathered on the Miller survey (areas B–F) are now stored in the Michael C. Carlos Museum, Emory University, Atlanta.

³ A = 4,542; F = 2,754.

⁴ It should be noted, however, that some of the pottery wares discussed in the following chapter do not have secure dating. The possibility that some of the handmade, wheelthrown unglazed, and lead glazed wares date before *c.* 1150 is not discounted.

within the citadel in the Mamluk 'reception hall' north of the keep.⁵ The evidence from written sources and archaeological data both suggest that this complex was constructed during the first half of the fourteenth century (see discussion of this feature in chapter 3).

Areas B–E are the result of surface survey around the walls of the citadel and old town of Karak.⁶ The material from these survey areas provides valuable comparative data for the larger groups of ceramics in areas A and F. First, the shards gathered around the walls of Karak may provide evidence of the ceramic consumption in the town and citadel over a wider timespan than the assemblages found within the citadel itself. Secondly, areas B–E may be used to test whether the general profile of areas A and F represents an accurate picture of pottery consumption in Karak during the period most strongly represented (i.e. thirteenth to early fifteenth century). The results of such field surveys should, however, be treated with caution. Some pottery types are regularly over-represented in field surveys because they are more easily identified as diagnostic of a given period. For instance, the ubiquitous handmade pottery with geometric slip painting is usually reported in much higher numbers than undecorated handmade wares. In addition, body shards of lead glazed ceramic are far more likely to be collected as diagnostic Middle Islamic pottery than are body shards of wheelthrown unglazed wares. The statistical discrepancies which result from the difficulties of identifying and dating items such as undecorated handmade and unglazed wheelthrown body shards should be considered when making comparisons between field survey and excavated material.

It will be apparent from the previous comments that there exist significant constraints upon the interpretation of the ceramic evidence from Karak. Due to the absence of reliable internal dating evidence for areas A–F this study has to rely upon comparanda from other excavated sites in the Levant. In view of this limitation, the approach adopted here is to identify the wider trends in ceramic consumption through the Middle Islamic period rather than try to correlate the ceramic evidence with specific events in the written record of the site.

⁵ Brown (1989). An occupational sequence was recovered from these excavations. The recovery of a fourteenth-century Mamluk coin under a plaster floor (p. 294) in the palace area provided dating for the initial construction phase.

⁶ The number of shards per area is: B = 161; C = 191; D = 481; E = 72.

The other aspect of the study of the Karak ceramics is the analysis of the distribution patterns for individual pottery types. As with the discussion of the dating, the results of any analysis must be seen in the context of the limitations of the comparative data from excavations and field surveys (the locations of the excavations and field surveys consulted during this study are given on figs. 7–9). It has already been noted that the collection techniques employed on field surveys can result in the over-representation of specific pottery types in the Middle Islamic period. In addition, the low priority usually assigned to Islamic occupation levels means that the pottery from this period is often incompletely published with no statistical breakdown of the entire ceramic assemblage. The approach taken in this book is to create distribution maps that are restricted to noting the occurrence of a given pottery type on each site rather than establishing the numbers, or the relative density within the overall assemblage.

The settlements of the Karak plateau have been studied on a number of archaeological field surveys and excavations.⁷ The Miller survey of the Karak plateau provides the most comprehensive information for the ceramic wares of the region in the Middle Islamic period, and some words are needed about the results of this important project.⁸ The intention of this discussion is to outline the ways in which the information gathered on this survey can be used for the understanding of the Karak ceramic assemblages. 443 sites were identified on the plateau and the periods of occupation were dated with reference to the finds (most commonly, architectural features and pottery deposits). The ceramic specialists were able to assign a large number of shards to phases after *c.* 1000.⁹ The pottery shards described by the survey as ‘Ayyubid-Mamluk’, ‘Mamluk’, ‘Late Islamic’, and ‘Ottoman’—an assemblage comprising some tens of thousands of shards—were analysed in detail by Robin Brown. Using the results of Brown’s meticulous

⁷ Worschech (1984 and 1985), Miller (1991); Brown (1992); Reed (1972); Johns, McQuitty and Falkner (1989); McQuitty and Falkner (1993). The archaeological and historical evidence for settlement patterns on the Karak plateau are discussed in Johns (1995). The Karak Resources Project (directed by Gerald Mattingly) is continuing the work of the Miller Survey of the 1980s. For the current research of this project, see Mattingly (1996); and studies at: www.vkrp.org.

⁸ See Miller (1991) and Brown (1992).

⁹ No shards diagnostic of Crusader occupation were reported on the field surveys around the castle or elsewhere on the Karak plateau. A few lead-glazed wares in areas A and F may have been imported from areas under Frankish control.

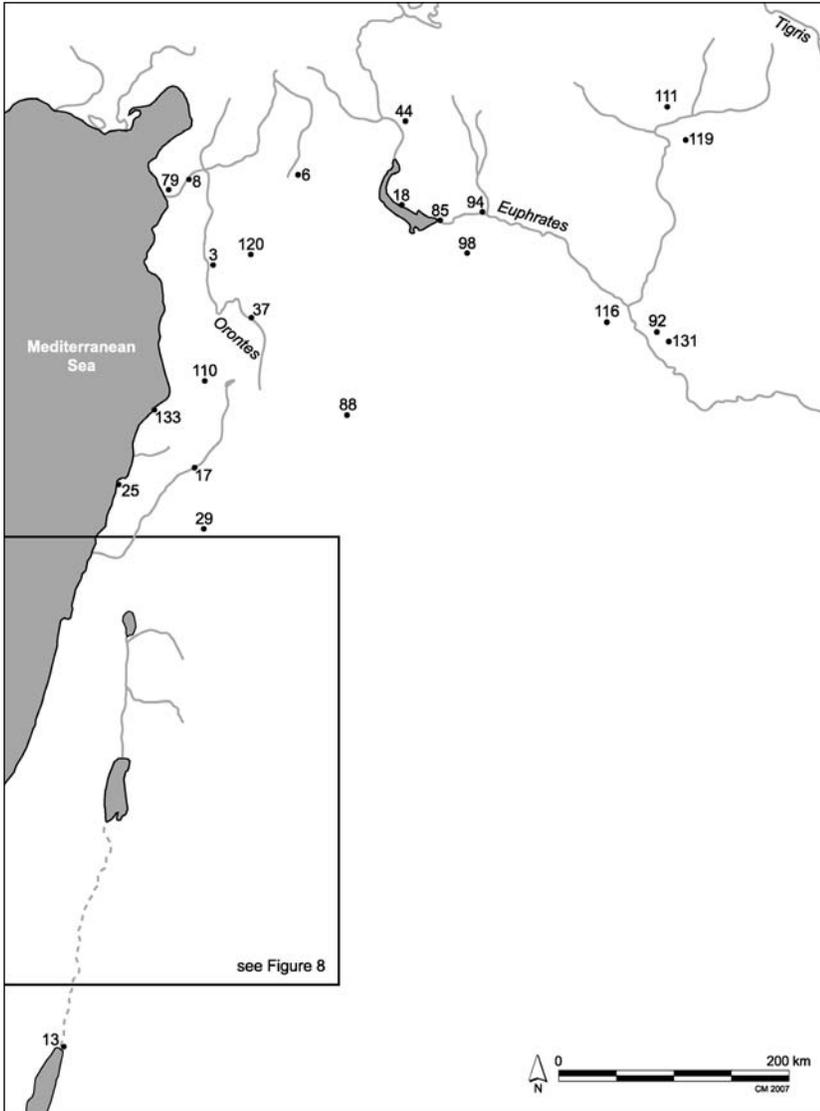


Figure 7. Map of Bilād al-Shām showing excavations reporting Middle Islamic pottery.

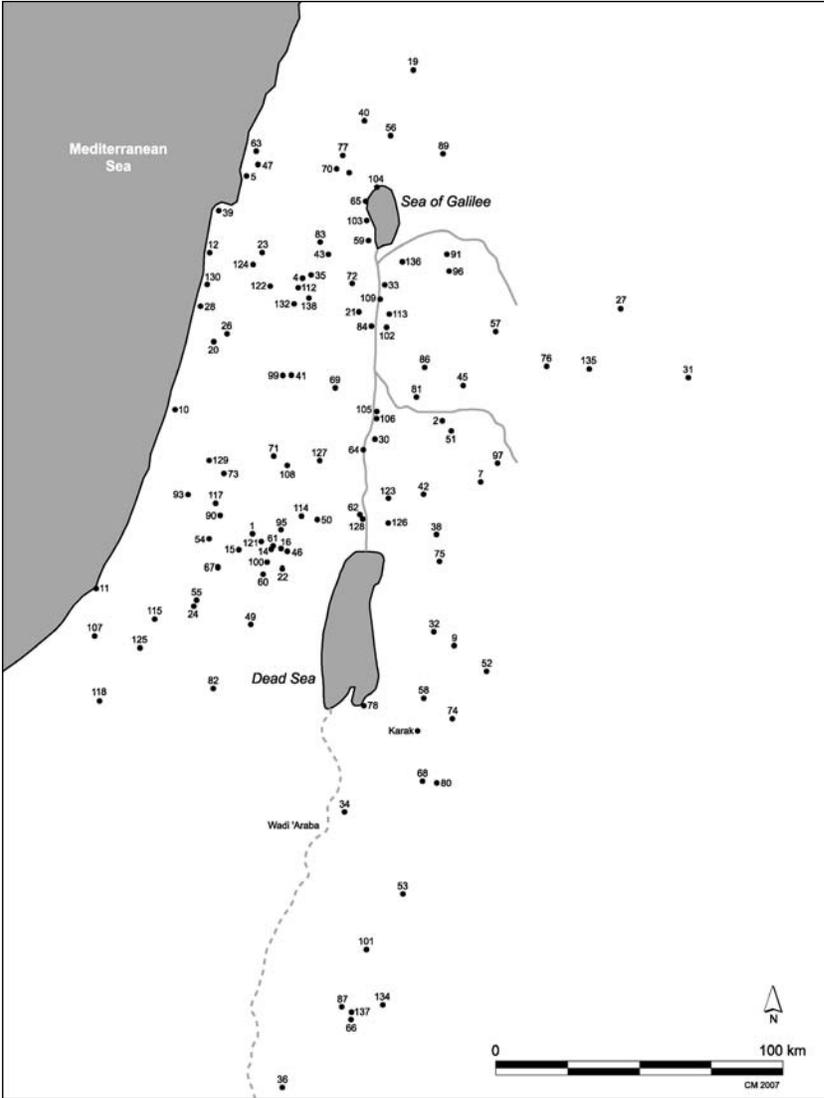


Figure 8. Detail of map on figure 7.

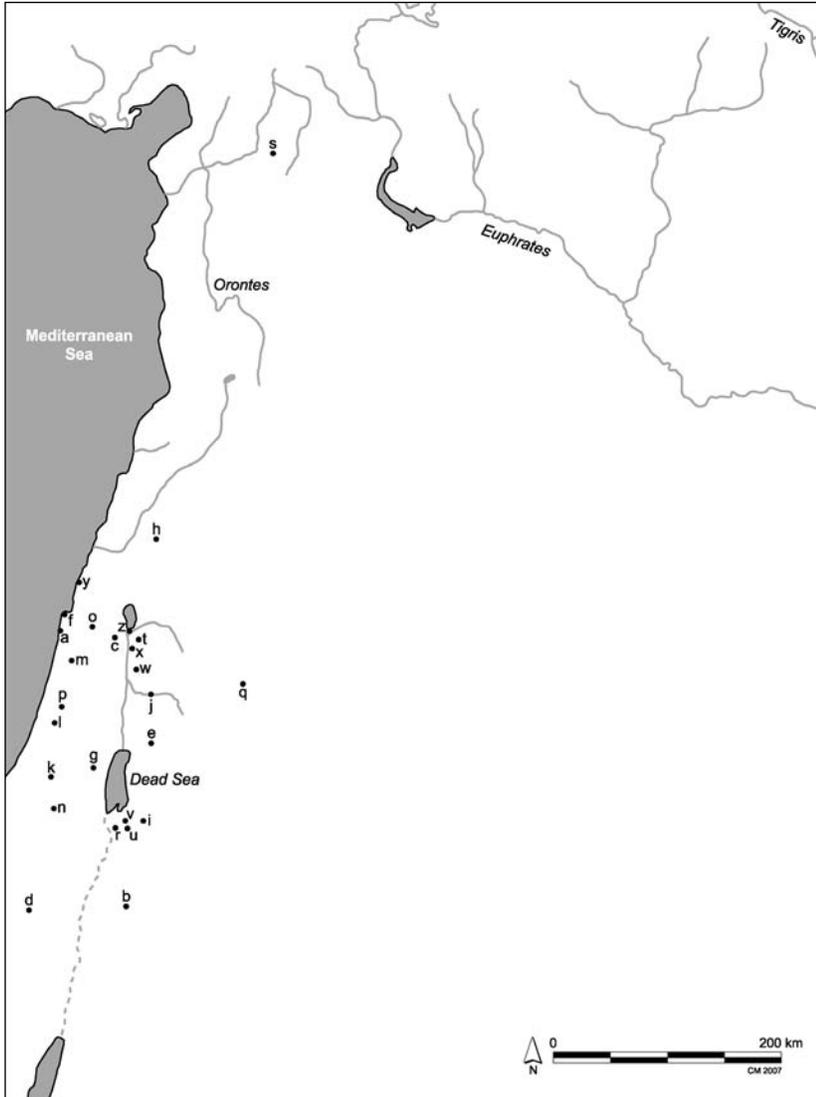


Figure 9. Map of Bilād al-Shām showing regional surveys reporting Middle Islamic pottery (dots mark approximate location of the survey).

research, I also undertook an examination of the Miller survey material as part of the current research project.¹⁰

Some comments are needed concerning the general methodology of the Miller survey, because they have a bearing upon the analysis of the pottery.¹¹ Due to the large area covered by the survey no attempt was made to grid out the region and search by intensive field walking. The identification of sites relied upon visible evidence of occupation (mounds of occupational debris, ruins of buildings, and so on). The actual area surrounding each of the identified sites was subjected to surface pickup, but no consistent approach was adopted in the area searched or the methods of collection. In addition, of the shards collected per site, only those judged to be diagnostic of any given period were retained for further analysis. While it is possible to make general comments concerning the predominance of handmade wares in the ceramic assemblages, or the tendency of the sites near to the main trade routes to report greater concentrations of glazed pottery, one should be cautious in making more subtle distinctions concerning relative densities of individual wares on specific sites, or on the plateau as a whole. Thus, the analysis in this book concentrates on the occurrence of a given ware rather than the actual numbers of shards found per site on the plateau.

Brown's important study of the archaeology of the Karak plateau sought to establish trends in settlement patterns that resulted from environmental, economic, and historical factors. While acknowledging the limitations of the ceramic data from the survey, the author has been able to demonstrate how the material culture of individual sites (particularly the proportion of wheelthrown and glazed wares within the overall assemblage) is affected by factors such as the proximity to important trade routes or to the principal urban centre of Karak. Brown also argues for a significant shift in settlement patterns on the plateau in the sixteenth century. She suggests that the breakdown in security in the region led the population to move to the more defensible mountainous areas of the south and east of the plateau. This shift may have

¹⁰ See Brown (1992 and 2000). Only sites reported as having five or more 'Ayyubid-Mamluk', 'Mamluk', 'Late Islamic' or 'Ottoman' shards were analysed in the present study.

¹¹ The Miller survey adopted the methods employed earlier by Nelson Glueck in his surveys of the region. The most significant difference between the two was that the Miller survey applied less interpretation of the period and function of architectural remains. I am indebted to Robin Brown for these observations.

been accompanied by an increased use of local handmade undecorated pottery because the inhabitants no longer enjoyed access to the trade networks of the south of Bilād al-Shām. This study presents a highly plausible account of the demographic changes at the end of the Mamluk period, but it should be noted that the wares used to substantiate the argument cannot yet be related to any dateable sixteenth-century contexts in the south of Jordan.¹²

In the following chapters use is made of both finds from the Miller survey and the analysis of the ceramic evidence by Brown. The previous paragraphs are intended to point out some of the limitations of this evidence, but it should be noted that the utilisation of Islamic material from other field surveys in Bilād al-Shām involves many of the same considerations outlined above. The data from the Miller survey are employed to illustrate the ways in which Karak, as the major economic and political centre, related to the smaller urban and rural communities of the plateau.

Section 1: Handmade Pottery

The handmade pottery in the Karak assemblages can be split into two basic types: handmade undecorated wares and handmade geometrically painted wares. Together these wares constitute 6% of the total assemblage.¹³ Although hand construction (i.e. coiling and hand moulding) was also adopted in the manufacture of large kiln-fired vessels as well as some relief-moulded objects, shards are defined here as ‘handmade’ if they fall into all, or the majority of the criteria outlined below.

The technical characteristics which identify handmade undecorated ware and handmade geometrically-painted ware fall into three main categories: the preparation of the ceramic paste; the method of construction; and the method of firing. The ceramic paste is subject to considerable variation, but most examples are made of poorly levigated

¹² For a general discussion of handmade pottery in the late Mamluk and Ottoman periods, see Milwright (2000), pp. 193–95.

¹³ Total = 482, handmade undecorated ware shards comprise 51% (total = 247: A = 145, B = 4, C = 8, D = 17, E = 11, F = 57) with handmade geometrically-painted ware making up the remaining 49% of the corpus of handmade shards (total = 235: A = 95, B = 10, C = 15, D = 40, E = 9, F = 66).

clays frequently with the addition of sand, straw or dung as a temper.¹⁴ Marks left by burnt out chaff and other organic material are often visible both on the inner and outer surfaces as well as in the broken edges of shards. Coil construction is generally favoured with closed vessels probably formed around a bag of sand or soil and open vessels over a convex shaping dish or a basket covered in a layer of fabric.¹⁵ Hand moulded ribs and handles as well as bands of finger impressed ornamentation are also encountered. In some cases, the surface of the vessel was burnished prior to firing. Handmade vessels were generally baked in an open fire or a clamp (i.e. a covered fire).¹⁶ Firing faults identified on handmade pottery such as surface bloom, cracks and spalling are the result of the uneven temperature and atmosphere during the firing. Unlike the majority of the relief-moulded and wheelthrown vessels examined, the variation between the fired colour of the surface and the core of handmade shards is often pronounced.

Although the handmade shards in the Karak assemblage do not necessarily exhibit all of the characteristics described above, handmade undecorated ware and handmade geometrically-painted ware can be readily identified by the irregularity of the profile, the soft and friable ceramic fabrics, and the uneven surface colouration. The only technical difference between the two wares is that the latter is decorated with coloured slip paint.

Handmade wares (Catalogue Pages 1–4, pp. 276–282 & 348–351)

Handmade undecorated pottery is a technically and stylistically heterogeneous group (catalogue pages 1–2). The shards in the Karak assemblage have been constructed from a wide variety of ceramic fabrics and have been subjected to a range of firing conditions. The degree of organic temper employed varies greatly with a few examples, such as A1 [1.1], containing abundant crushed crystalline calcite but no organic

¹⁴ For petrographic analysis of handmade pottery from Khirbat Fāris, see Abu-Jaber and al-Saa'd (2000). The use of grog (ground up pot shards) is reported in ethnographic studies of handmade pottery production in north Jordan in the 1970s and 1980s. See Mershen (1985), p. 79; Johns (1998), p. 78.

¹⁵ Franken and Kalsbeck (1975), pp. 38–39. Examination of shards often reveals textile marks on the interiors of handmade bowls and jugs.

¹⁶ For detailed comparisons of the firing temperatures and degree of atmospheric regulation in open fires, clamps and simple updraught kilns, see Sillar and Tite (2000); Pool (2000).

material.¹⁷ The degree of variation in scale and form indicates that handmade undecorated ware was utilised for diverse functions. Both open and closed shapes are found, but with the former being more scarce. The bowls in the assemblage are small with flattened rims, sometimes with the addition of a horizontal strap or ledge handle on the exterior. Closed vessels include bag-shaped containers and globular pots with everted rims. Several shards come from larger storage vessels; these included strap handles (sometimes with thumb rests) and flat disc bases. Some of the poorly fired, friable shards with a high organic content may be from large ceramic objects such as grain bins (for instance A.40 [1.18]) or clay ovens (s. *tābūn*). *Tābūns* have been located on excavations of late Byzantine and Islamic occupation levels on sites near Karak, such as Mudaybi', and ovens of similar form continue to be used today in villages in the south of Jordan. A.38 [1.8] may be part of a crude saucer lamp.

A variety of ceramic fabrics was utilised in the manufacture of the handmade geometrically-painted wares. The shards also exhibited evidence of different modes of construction, ornamentation and firing (catalogue pages 2–4). Visual examination of this group of ceramics suggested that a few shards may have been fired in a kiln. Neither burnishing nor the use of an overall slip are common in the Karak assemblage. There is wide variety of motifs and painting styles and both monochromatic and bichromatic slip-painting are represented. The sample is too small, however, to be able to establish whether painting styles can be associated with specific fabric types or vessel forms. The majority of the shards are from closed vessels with smaller numbers of open bowls with flattened rims also reported. Closed vessels comprise bag-shaped jars, globular pots with everted rims (with and without ledge handles), and jugs. The jugs have a globular body and usually one or more handles joining between the shoulder and the neck of the vessel. The necks are sometimes fitted with filters. A.216 [4.13] and A.243 [4.12] are examples of spouts from jugs. The small number of these objects in the Karak assemblage suggests that few handmade geometrically-painted ware jugs incorporated this feature. A.159 [4.6] comes from a small vessel standing on, possibly four, projections. This piece

¹⁷ This feature is also noted on handmade cooking pots from Tal Jimna. See Schaefer (1989), p. 43.

may be part of a zoomorphic container or a footed serving dish.¹⁸ While zoomorphic glazed and decorated ceramic artefacts are known from the Early and Middle Islamic periods, examples of unglazed ceramic figurines seem to be considerably more rare.¹⁹ Interestingly, a fourteenth-century book on market law (*hisba*) does mention the existence of animal figurines that were made from clay as toys for children.²⁰

The number of distinct painting styles evident in the Karak handmade geometrically-painted ware suggests that the vessels came from diverse sources, and were presumably produced over an extended period. Some broad stylistic categories can be identified. The simplest style, represented by A.161 [4.2], D.4903 [2.10], F.5496 [2.9], consists of broad concentric bands of red-brown paint on either the interior or exterior of the vessel. The flattened rim bowl, D.4903 [2.10], exhibits a slightly more advanced version with lines of paint defining the oblique ridge on the exterior. The more characteristic style of handmade geometrically-painted ware involves the creation of bands or panels filled by densely painted geometric designs. Bowls sometimes have bands of decoration applied to the flattened section of the rim, though this is a relatively rare feature.²¹ The fineness of the lines and the overall quality of the painting varies considerably in the Karak assemblage. While bichromatic designs are often among the finer examples, some monochrome pieces, such as A.241 [3.8], A.244 [4.16], are also painted to a high standard. A bichromatic painted bowl, F.5505 [6.4], is unusual both for the painting style (which allows more undecorated space and employs some atypical motifs) but also for the fact that the underside of the base also carries designs. There is little to suggest, however, this latter feature may be equated with the maker's marks and 'signatures' sometimes found on the undersides of glazed bowls of the thirteenth and fourteenth century. The last painting style, represented by A.152

¹⁸ Cf. Riis and Poulsen (1957), fig. 1041.

¹⁹ Zoomorphic containers are well known in glazed pottery from the Early and Middle Islamic periods (e.g. Abdulhakk [1951]; Wilkinson [1973], nos. 122, 125–27, 130; Grube [1976], no. 180). A fragment of what may be an handmade geometrically-painted ware animal figurine was also unearthed during the 1994 season at Khirbat Fāris (unpublished).

²⁰ Ibn al-Ukhuwwa (1938), p. 56 (Arabic text).

²¹ This feature is also seen on bowls from: Jarash (Tholbecq [2000], pl. V.30.1); Jerusalem, Damascus Gate (Wightman [1989], figs. 51.1–3, 5, 6; 52.5); and Tal Abū Qa'dān, phases E, H, J (Franken and Kalsbeek [1975], figs. 53.10, 11, 25, 29, 30; 56.1, 2).

[3.3], A.153 [3.9], involves covering the majority of the surface in a monochrome slip paint so that the linear designs are left in reserve.²²

Very large numbers of handmade pottery have been collected and published from sites in Bilād al-Shām.²³ Such wares comprise 75–100% of the total ceramic assemblages in Middle Islamic occupation phases on rural sites of Jordan south of the Wādī Zarqā'. Handmade wares also appear on virtually every site identified during the Miller survey of the Karak plateau.²⁴ Lower concentrations of handmade are reported from excavations of urban settlements. The evidence from the archaeological record indicates that handmade geometrically-painted ware vessels corresponding to types in the Karak assemblage appear first in excavated contexts dateable to the late twelfth century, and become the dominant pottery ware in rural settlements during the thirteenth century.²⁵ The low proportion of handmade wares in the Karak assemblage (c. 6% of the total), and the approximate parity in numbers of handmade undecorated ware and handmade geometrically-painted ware contrast with the general pattern found on the Miller survey of the Karak plateau.²⁶ The contrast between the assemblages from Karak and from the remainder of the plateau can be explained by the differing socio-economic profiles of the groups residing in the respective sites; the occupants of the town and castle Karak included members of the military and bureaucratic elite, as well as the mercantile classes while elsewhere the great majority of the sedentary population was composed of peasant farmers.²⁷ Nevertheless, the presence of some handmade wares in

²² This technique appears to be rare. One example is noted at Abū Ghawsh (De Vaux and Steve [1950], pl. F.17).

²³ For a list of the most important sites, see Johns (1998). See also notes in Milwright (2001).

²⁴ Personal observations based on analysis of the survey pottery stored in the Michael C. Carlos museum, Atlanta.

²⁵ Johns (1998), pp. 65–67. For a discussion of the continuation of handmade ware into the late Mamluk and Ottoman periods, see Milwright (2000), pp. 193–95.

²⁶ It is possible that the actual levels of handmade undecorated ware production in the Middle Islamic period have been underestimated. The dating of handmade undecorated ware is more difficult and body shards of handmade undecorated ware are less likely to be retained as diagnostics in the final shard counts for sites.

²⁷ Clearly this statement is a simplification. Small towns on the plateau such as Rabba and Mu'ta must have contained groups engaged in commerce. This fact is reflected in the greater proportions of wheelthrown and glazed pottery found during surveys. The excavation of the village of Khirbat Fāris has revealed small, but significant quantities of glazed pottery and 'luxury' items such as marvered glass (see McQuitty *et al.* [2000], pp. 191–92, fig. 22). Such evidence suggests that the wealthier occupants of villages

Karak does indicate a relationship existed between the consumption patterns of the town and the surrounding region.²⁸

That handmade undecorated ware was produced to perform a wider range of practical functions—from clay ovens and large storage vessels to smaller bowls and jars—is reflected in the greater degree of diversity in ceramic preparation, construction, and surface treatment. The presence of a fragmentary unfired handmade undecorated ware handle (A.3520 [not illustrated]) in the assemblage indicates that handmade undecorated wares were produced in or near Karak, but other items, such as A.1 [1.1], exhibit signs of more specialised production (such as the careful burnishing, the use of a calcite temper, and the absence of organic material), and may have been brought from a greater distance. The majority of the comparanda located for the Karak handmade undecorated ware are to be found in the Southern Ghawr, Karak plateau, and south of the Wādī al-Ḥasā'. The Jordan valley, Balqā', and Palestine provided smaller numbers of comparable vessels. Thus, a highly localised distribution pattern can be suggested for handmade undecorated ware. Some similarities can be drawn between Karak shards and items from southern Jordan found in eleventh-century contexts at Gharandal and Khirbat al-Nawālfā and twelfth-century contexts at Wu'ayra.²⁹ Dhibān, Ḥasbān, and Tal Abū Qa'dān provide comparanda from thirteenth- and fourteenth-century contexts.³⁰ Excavated contexts at Tal Jimna and Ti'innik may indicate the survival of comparable handmade undecorated ware vessels into the fifteenth and sixteenth centuries.³¹

may have enjoyed some access to commodities imported onto the plateau from Syria and Palestine.

²⁸ The presence of handmade geometrically-painted ware on important urban sites is reported elsewhere. For instance, excavations at the ruined citadel in Ḥamā also revealed the presence of small numbers of handmade geometrically-painted ware vessels. These were unusual, however, in the range of decorative forms (including plant, animal and human depictions) employed by the painters of the pots. See Riis and Poulsen (1957), figs. 1000–1039.

²⁹ Walmsley and Grey (2001), pp. 153–58, fig. 9.6–10; 'Amr *et al.* (2000), fig. 18.3; Brown (1987), figs. 8; 9.16–19.

³⁰ Tushingam (1972), figs. 7.29; 8.24, 27, 28; Sauer (1973), fig. 4.164; Franken and Kalsbeck (1975), fig. 75. For Tal Abū Qa'dān, see revised dating of the stratigraphy in Sauer (1976).

³¹ Schaefer (1989), pp. 43–46, fig. 8.1, 2; Ziadeh (1995), pp. 217–18, figs. 8.4–9; 9. For a revision of the dating of strata at Ti'innik, see Milwright (2000), p. 192. Crude handmade undecorated pottery also occurs in late nineteenth- and early twentieth-century contexts at Umm al-Jimāl in northern Jordan. See Parker in de Vries (1998), pp. 215–18.

Brown, in her study of the ceramics and occupation patterns on the Karak plateau during the Middle Islamic phase, argues that handmade undecorated ware replaces handmade geometrically-painted ware as the dominant ceramic on the plateau in the Ottoman period.³² She notes the predominance of handmade undecorated ware in the marginal settlements of the southern highlands of the plateau and concludes that, with the decline of central government control in the sixteenth century, the sedentary population moved to this remote area because it afforded better security. Cut off from commercial contact with urban centres in Palestine and the remainder of Jordan the occupants of these villages had to rely upon simple, locally manufactured pottery.³³ The handmade wares from Karak probably do not fit into this chronological division, however; comparanda for the Karak handmade undecorated ware suggests that some pieces may date as early as the twelfth century. Further, handmade undecorated ware at Karak is more heterogeneous in aspects of ceramic preparation, surface treatment, scale, and profile than handmade geometrically-painted ware suggesting that the two wares may have existed coevally, occupying different functional niches in the ceramic repertoire.

Handmade geometrically-painted ware is a more homogeneous ware than handmade undecorated ware in terms of the preparation and firing of the ceramic. Vessel types in the former ware are limited to small to medium sized jugs and bowls. Two basic styles of handmade geometrically-painted ware can be identified in the Karak assemblage: the first is decorated with simple bands of monochrome slip paint, and the second is the more familiar style of geometric ornament painted in either monochrome or bichrome slip paint. The first style is rare at Karak and is represented in the catalogue by A.161 [4.2], F.5496 [2.9] and F.5508 [4.5]. The second style exhibits a greater range of technique and decoration. A small number of the second painting style (such as A.153 [3.9], A.176 [4.9], A.244 [4.16]) is distinguished by careful preparation of the ceramic paste, sharp moulding of the profile, use of burnishing or an overall slip, finely painted decoration, and relatively even firing (perhaps in a kiln).

Wheelthrown wares with monochrome slip painting are reported in numerous Umayyad/Early Islamic contexts in the south of Bilād

³² Brown (1992), chapter 11.

³³ Brown (1992), p. 434, map 31.

al-Shām.³⁴ Slip-painting is also found occasionally on eleventh- or twelfth-century wheelthrown unglazed pottery produced in Raqqa,³⁵ and also on some storage vessels from Ayyubid-Mamluk contexts in the Jordan valley.³⁶ There appears to be no technical or aesthetic reason to propose that these examples of slip-painted wheelthrown pottery had any impact on the development of painted decoration on Middle Islamic handmade wares, however. It has been hypothesised that the mature style of handmade geometrically-painted ware derives from a simpler style of slip-painted decoration on handmade pottery.³⁷ A type of handmade ware with crude monochromatic slip painting has been identified in eleventh-century contexts at ‘Aqaba/Ayla, and later at Gharandal and Wu‘ayra.³⁸ Further examples of handmade pottery with simple monochromatic slip painting have also been located at other sites providing less certain dating evidence (fig. 10).³⁹ Donald Whitcomb found evidence for the standardisation of ceramic fabric (including little or no organic temper), size, and profile in the ‘proto-handmade geometrically-painted ware’ bowls from ‘Aqaba/Ayla, perhaps indicating that they were meant to be traded.⁴⁰ It has been suggested by Jeremy Johns that the mature style of handmade geometrically-painted ware could have utilised existing mercantile networks in order to spread over the region.⁴¹

³⁴ For instance, see examples illustrated in Hendrix *et al.* (1996), pp. 254–61.

³⁵ A report on the pottery from the Raqqa Ancient Industries Project excavations is currently being prepared by the author. Some examples of slip-painted unglazed pottery of this type appear nearby at Tal Shahīn. See Tonghini (1995), fig. 17.d, e.

³⁶ For instance, Baysan (Zori [1966], fig. 10.8); Ṭabaqat Faḥl (Smith [1973], pl. 71.480).

³⁷ Whitcomb (1988), p. 212; Johns (1998), p. 78.

³⁸ Whitcomb (1987), p. 261; Whitcomb (1988), p. 212, fig. 5.a, b; Walmsley *et al.* (1999), fig. 12.4–6; Walmsley and Grey (2001), p. 158, fig. 10.7–9; Brown (1987), p. 284; it is also noted that similar pottery was recovered from twelfth-century contexts at the ‘Ammān citadel.

³⁹ Abū Ghawsh (De Vaux and Steve [1950], pl. F.24); ‘Arā‘īr (Olivarri [1965], fig. 3.11); Buṣrā (Berthier [1985], nos. 28, 29, 36, 37); Khirbat Fāris (Johns *et al.* [1989], fig. 27.57; MacQuitty and Falkner [1993], fig. 20.36–39); Ṣaṭāf (Gibson *et al.* [1991], fig. 21.4, 5, 10); Tal Abū Qa’dān, phases K, N (Franken and Kalsbeek [1975], figs. 58.1, 2; 63.23, 31); Wādī ‘Arab (Hanbury-Tenison [1984], fig. 17.1); Wādī ‘Isal (Jacobs [1983], fig. 15.c).

⁴⁰ Whitcomb (1988), p. 212.

⁴¹ Johns (1998), pp. 71–73, 78–79. He also discusses the possibility that the swift spread of handmade geometrically-painted ware around Bilād al-Shām may have been the result of the movement of itinerant potters.

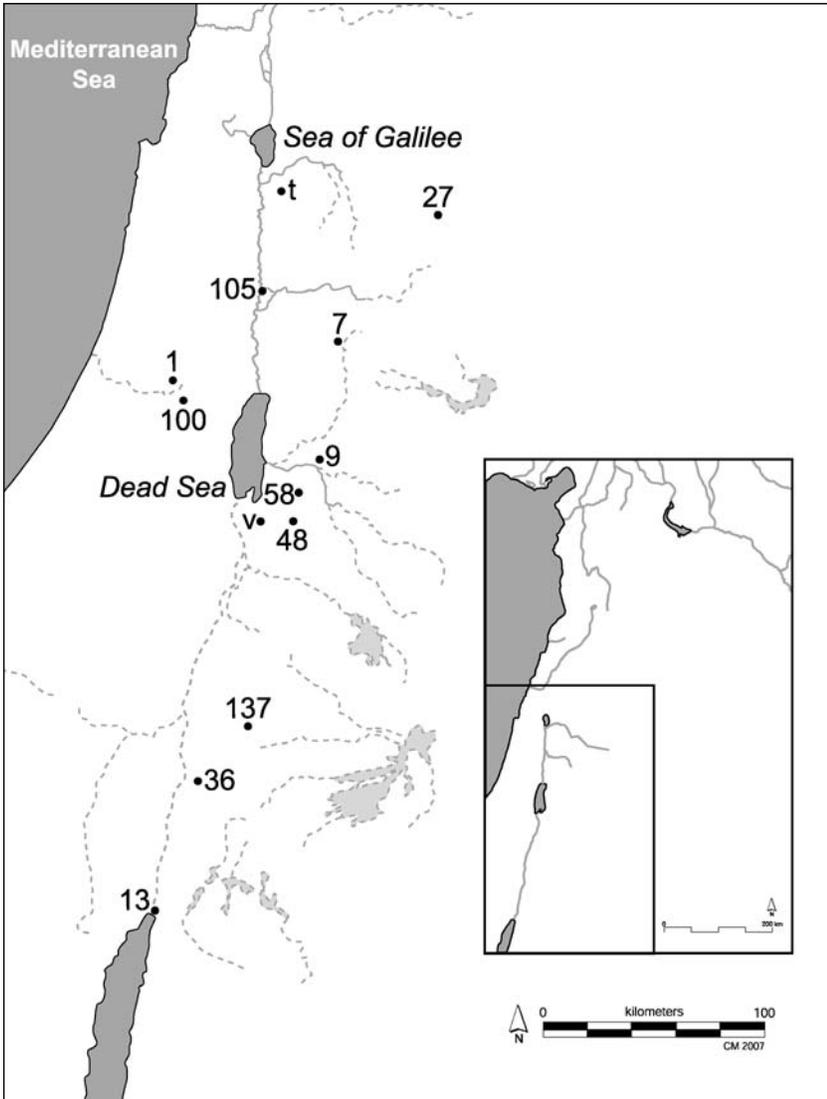


Figure 10. Distribution in Bilād al-Shām of handmade pottery with simple slip-painting.

A small group of handmade geometrically-painted ware in the Karak assemblage exhibits signs of considerable expense of time in the process of manufacture and decoration. Attractive, sturdy vessels such as these could well have been traded, perhaps even imported onto the Karak plateau from other regions in the south of Bilād al-Shām. The commercial phase of handmade geometrically-painted ware suggested by Johns may have been short-lived, however, because the technical aspects of the manufacture and decoration could easily have been assimilated into a rural environment. According to an ethnographic model of handmade pottery production and distribution from North Africa,⁴² this process of assimilation would result in a reduction in both complexity and consistency in the manufacturing process as well as the evolution of highly localised vessel forms and modes of surface decoration. Archaeological evidence is not yet available to test this model, though a progressive simplification in the painting style through time has been observed in some excavated assemblages. For instance, at Qaşr al-Ḥayr East it was noted that, while a wide variety of handmade geometrically-painted ware was found on the site, the surface deposits only contained monochrome painted wares.⁴³ It is possible that the careful analysis of the styles and decorative motifs employed in the painted wares of different sites will provide the key to isolating distinct regional painting styles. As yet, the existing typologies of slip-painted ornament have provided limited insights into this question.⁴⁴

*Section 2: Unglazed Wheelthrown Wares (Catalogue Pages 5–16,
pp. 282–297 & 352–363)*

Unglazed wheelthrown wares constitute *c.* 60% of the total assemblage (total of 4,932 shards).⁴⁵ Diagnostic shards make up 32% of unglazed wheelthrown group (1,564 shards). Wheelthrowing is the principal method of construction with hand coiling also employed for the manufacture of large storage vessels. Coil constructed unglazed wheelthrown vessels can be differentiated from the handmade types discussed in the

⁴² Balfet (1965).

⁴³ Grabar *et al.* (1978), p. 113.

⁴⁴ See Sauer (1973), pp. 55–56; Franken and Kalsbeek (1975), figs. 51, 52; Khadija (1992).

⁴⁵ The numbers of shards by area are A = 3274, B = 61, C = 94, D = 148, E = 38, F = 1,317.

previous section because the former are fired to a sustained high temperature in a kiln. Basalt, chert, and carbonate are common inclusions, while traces of organic material are relatively rare. Fabrics vary in hardness, levigation, and porosity reflecting the wide range of functions for which unglazed wheelthrown wares were manufactured. Burnishing is found on a few small vessels although many of these examples may date from Byzantine or Early Islamic periods. Incised and hand moulded decoration are both uncommon. Post-firing surface treatments including the addition of a layer of plaster or pitch are occasionally encountered. These substances may have been employed to repair cracks or simply to render the surface less porous.

The unglazed wheelthrown shards are separated into the following categories: 1) large water jars and storage vessels; 2) basins; 3) vessels associated with sugar manufacture; 4) drainpipes and related items; 5) *ibṛīqs* and other medium to small storage vessels; 6) bowls; and 7) miscellaneous items.

Large water jars and storage vessels (Catalogue Pages 7–9, pp. 283–285 & 354–356)

Large water jars (*zīrs*) and other large storage vessels constitute *c.* 7% of the total of the diagnostic unglazed wheelthrown shards.⁴⁶ The ceramic pastes are generally poorly levigated with large mineral and, rarely, organic inclusions. These inclusions may have been deliberately added in order to reduce the possibility of the warping and cracking during the firing process. The necks of vessels are often wheelthrown, but coil construction is favoured for the formation of the body. Incised decoration and layers of slip or plaster are noted on some examples. The interior surfaces of some jars were painted with bitumen in order to make them waterproof. Body shards from storage jars carrying stamped decoration are discussed later in the chapter. The jars had a flat disc base supporting a bulbous body. The shoulder tapers sharply to a neck with a diameter ranging from 180–285 mm. The neck profiles fall into two basic categories, those with folded over rims and those with necks terminating in a wide flattened rim. One of the largest and most ornately decorated storage jars, A.3045 [8.1] also carries a partial incised inscription on the shoulder reading, *‘amala al-ḥāl* [...].

⁴⁶ Total = 110: A = 68, B = 4, C = 0, D = 12, E = 11, F = 15.

Whether the second truncated word is part of the name or *nisba* of the potter is unclear.

There can be little doubt that large jars (s. *zār*) were a common feature of domestic and commercial premises in the towns and cities of the Levant.⁴⁷ Surprisingly, few examples have been published from excavations of Middle Islamic contexts, though broadly similar storage vessels are plentiful on production centres such as Raqqa in earlier periods.⁴⁸ Such jars would have been used both for holding water as well as for the storage and the transport of commodities such as olive oil, grape syrup (*dibs*) or molasses. De Mignanelli, who was in Damascus at the end of the fourteenth century, reports that storage jars contained up to 600 Venetian pounds of sugar.⁴⁹ The construction and firing of such large ceramic vessels must have required specialist knowledge, and *zār*s probably enjoyed a relatively high unit cost. The presence of a what may be a ‘signature’ of a potter on A.3405 [8.1] perhaps indicates that such specialised manufacturing skills carried some social status.⁵⁰ The high occurrence of large storage vessels at Khirbat al-‘Āl,⁵¹ and Tal Jimna,⁵² may indicate that this specialised craft was practised on these rural sites, but it is also likely that *zār*s were also produced in the major urban centres. Another possible model—albeit, one that has no archaeological evidence to support it—is that *zār*s were produced by itinerant craftsmen who made batches of vessel on the site they were required.

The presence of *zār*s in an excavated fourteenth-century context in Karak citadel confirms that these items were in use in the castle in the Middle Islamic period.⁵³ Comparable material from excavated contexts at Shawbak castle and Tal Jimna gives dates from the thirteenth to the fifteenth century.⁵⁴ In addition, Brown notes the presence of large storage vessels on sites in close proximity to Karak or along the route of the King’s Highway. The same sites are also associated with con-

⁴⁷ For textual references to large jars used in urban contexts in the Islamic world, see Goitein (1958), pp. 188–89; Milwright (1999), pp. 510–12.

⁴⁸ Miglus (1999), pls. 38–39.

⁴⁹ De Mignanelli (1956), p. 226.

⁵⁰ For the study of ‘signatures’ on pottery of the Ayyubid-Mamluk period, see Abel (1930); Marzouk (1957); Jenkins (1984).

⁵¹ Reed (1972), figs. 3.4; 8.224, 224a.

⁵² Schaefer (1989), fig. 4.

⁵³ Brown (1989), fig. 7.28.

⁵⁴ Brown (1988), phase III; Schaefer (1989).

centrations of glazed pottery, suggesting that large jars can be taken as an indicator of more intense economic activity.⁵⁵ One of these sites, Thāniyya is known to have been the location of an annual market where pilgrims bought supplies for the southern leg of the *hajj*.⁵⁶ If jars were used extensively for the transportation of commodities, then it is likely that the examples from Karak will have come from a wide variety of locations in Bilād al-Shām.

Basins (Catalogue Pages 5–7, 9–10, pp. 282–286 & 352–354, 356–357)

Rims, bases and complete profiles from basins constitute *c.* 5.5% of the total of diagnostic unglazed wheelthrown shards.⁵⁷ The ceramic fabrics fall into two basic categories: the first has a granular texture with regular voids and firing between pale green to red-brown; and the second is harder, less granular and fires cream to pink. Both fabrics contain abundant (and often large) basalt, chert and carbonate inclusions as well as pockets of unmixed, reddish clay. The basins all adopt the same basic shape: a truncated conical profile with a flat, disc base and folded over rim. The main typological distinctions are in the shape of the rim and whether the basin has curved or straight sides. The diameter of these vessels (as recovered from the larger rim shards) varies between 420 mm and 630 mm. Basins are coil constructed though some may have been smoothed on a wheel or revolving stand. The disc base appears to have been made separately and attached to the body prior to firing. (This is indicated by examples such as A.294 [9.12] where the base has separated from the body during firing.) A plaster coating has been added to the interior in some examples, presumably to reduce the porosity of the fired ceramic. The minimal decoration consists of combed bands around the exterior.

Basins recovered in Early Islamic contexts in the Jordan Valley and Syria differ little in scale and profile from those found in Karak.⁵⁸ Evidently, there was little reason to change such a functional vessel form. Basins are usually recovered in small numbers in Middle Islamic contexts with the reported examples being widely dispersed all over Bilād

⁵⁵ Brown (1992), pp. 407–15, pl. 12.2.

⁵⁶ Ibn Baṭṭūṭa (1852–54), I, pp. 254–55.

⁵⁷ Total = 86: A = 61, B = 3, C = 3, D = 2, E = 3, F = 14.

⁵⁸ For instance, Tabaqat Faḥl (McNicoll *et al.* [1982], II, pls. 138.11–14; 139.2–4); Raqqa (Miglus [1999], pls. 11–15.

al-Shām from the Negev and Dead Sea valley up to northern Syria.⁵⁹ Tal Jimna is one of the few sites where such items are found in any density, perhaps indicating that basins were manufactured there. Firing faults on A.294 [9.12] and F.5586 [9.11] suggest that some were manufactured in the vicinity of Karak. The relatively high occurrence of these large functional vessels may be explained by the presence of a sizeable population living in the castle. Basins could have been used for washing or for the preparation of food and drink in large quantities.

Vessels associated with sugar manufacture (Catalogue Pages 10–12, pp. 285–286 & 357–359)

Vessels associated with the manufacture of sugar are common in the unglazed wheelthrown wares from Karak. The shards can be split into two basic types, conical vessels with an omphalos base (sugar pots) used for the crystallisation of the sugar and bag-shaped containers (syrup jars) used for the storage of molasses. Diagnostic shards from sugar pots constitute *c.* 26% of the total of diagnostic unglazed wheelthrown and *c.* 5% of the total Karak ceramic assemblage.⁶⁰ A further 228 body shards were identified as probable sugar pot fragments but these have not been included in this final count. Diagnostic syrup jar shards constitute *c.* 3% of the diagnostic unglazed wheelthrown and *c.* 0.6% of the total Karak assemblage.⁶¹

Sugar pots are conical in form with either straight or slightly curved sides. The mouth of the pot varies in diameter from 250–350 mm and the hole in the base is usually *c.* 25 mm in diameter. The largest rims in this group (A.257 [11.2] and A.326 [11.1]) may come from basins but are included here because of their similarities to other sugar pot shards in profile and ceramic fabric. The ceramic fabrics are well levigated and porous and fire from buff to pink. Sugar pots are coil constructed. In general, the interior of the pot is carefully smoothed although the

⁵⁹ Published basins come from Jerusalem (Crowfoot and Fitzgerald [1929], pl. XVI.24), Karak (Brown [1989], fig. 27.31), Khalīl (Bennett [1972], pl. III: II.A.4), Qubayba (Bagatti [1947], fig. 30.8), Ruṣāfa (Logar [1991], fig. 1.1–6), Southern Ghawr, Fayfāʾ (MacDonald [1992], pl. 30.p), Tal ʿArqa (Hakimian and Salamé-Sarkis [1988], fig. 18.8), Tal Jimna (Schaefer [1989], fig. 5), and Tal Qaymūn (Ben-Tor and Rosenthal [1988], fig. 7.10).

⁶⁰ Total = 410; A = 232, B = 10, C = 3, D = 35, E = 4, F = 126.

⁶¹ Total = 49; A = 47, D = 1, F = 1. A further 119 body shards were identified as probable syrup jar fragments.

treatment of the exterior is more cursory. The firing tends to be even although variations in surface colour probably indicate changes in the kiln atmosphere during firing.⁶² No surface decoration was noted on any example, though the post-firing application of a thick plaster layer was noted in a few cases.

Syrup (molasses) jars are represented in the catalogue by A.1099 [12.2], A.1124 [12.4], A.1127 [12.3], and A.3303 [12.1]. The jars are bag-shaped containers that taper to a mouth of diameter 105–140 mm.⁶³ The ceramic fabric of the syrup jars contains few voids, regular small inclusions and fires pale brown to pale orange. The body of the vessel tends to be thickly potted and the larger syrup jars may be coil-constructed. Many examples have pronounced ridges on the exterior. No correlation was noted between the rim shape and the presence or absence of ridges on the body. Many of the shards are extensively mottled with dark grey blotches. This may be mould growth caused by the molasses soaked into the ceramic surface.

Vessels associated with sugar manufacture are among the most extensively studied unglazed ceramics of the Middle Islamic period. Furthermore, the archaeological and historical studies of sugar processing sites in the Jordan valley, the Dead Sea region and Cyprus provide valuable information that may be used in the interpretation of the Karak material. At Karak, the diagnostic shards from sugar pots outnumber those from syrup jars by a factor of more than nine to one. It is supposed by the excavators of sugar mills in the Ghawr that the syrup containers were placed under the sugar pots to collect the fraction of the sugar which remained in a liquid state.⁶⁴ Therefore, it is reasonable to assume that a syrup jar would be able to collect the liquid from a considerably larger number of sugar pots. The presence of sugar pots and syrup jars in Karak indicates that both sugar and molasses were, at least in some cases, transported in the containers in which they were manufactured.

The majority of the syrup jars are made from a dull orange, hard fabric which does not correspond to the types found in the sugar pots. This fabric was probably designed to be less permeable and thus more suited to the storage of liquid. Excavated syrup jars constructed of

⁶² For a discussion of the construction and firing of sugar pots, see LaGro and de Haas (1989–90); Franken and Kalsbeek (1975), pp. 143–54.

⁶³ Cf. LaGro and De Haas (1989–90), fig. 8.

⁶⁴ See illustration in LaGro and De Haas (1989–90), fig. 1.

similar fabrics are illustrated and described from Ṭabaqat Faḥl and Tal Fandī.⁶⁵ The thick body and hard fabric may also have been used to minimise the risk of breakage during transportation. In general, the paste of sugar pots is softer and more porous than the syrup jars. Variations in fired colour within a single vessel are common; a phenomenon also observed at Tal Abū Qa‘dān.⁶⁶

Given the number of typological variations occurring on a single sugar processing site like Tal Abū Ṣarbū,⁶⁷ it seems unlikely that rim profile alone will provide a reliable source for either dating or provenance. One area of the design is likely to have been more carefully controlled, the internal volume. In a study of the sugar pots from the processing site at Kouklia (Palaeopaphos) in Cyprus, the excavators note three sizes of vessel: type I containing *c.* 1–2 litres; type II containing *c.* 4–6 litres; and type III containing *c.* 7–9 litres.⁶⁸ The largest vessels were the most numerous on the site while the smallest were the rarest. Drawing on evidence in the manual of the fourteenth-century merchant, Balducci Pegolotti, they conclude that the three types of pot were used for the manufacture of different grades of sugar: type I for ‘*bambillonia*’ or ‘*caffetino*’ (the most expensive types); type II for ‘*musciatto*’; and type III for ‘*polvere di zucchero*’ (the cheapest). Three grades of sugar are identified in Syrian sources of the Ayyubid-Mamluk period. The qualitative distinction were based on the number of times the syrup was boiled prior to crystallisation: *mukarrar* (three); *domaschino* or *tripolino* (twice); and *nabāt* (once).⁶⁹

In order to continue to produce vessels with a constant volume, sugar pots were probably constructed around a clay or plaster mould while the syrup jars may have been made around a bag containing a specified quantity of sand. An approximate calculation of the volume of the complete profile sugar pot from Karak (A.3384 [10.5]) came to a figure of *c.* 5.6 litres. By applying the coefficient of the height divided by the radius (1.3125) to the other rim shards from the corpus, it is possible to make approximate calculations of the range of internal volumes (it should be noted, however, that the angle of the body in relation to the

⁶⁵ Smith (1973), pl. 93.1168; Flanagan *et al.* (1994), p. 223.

⁶⁶ Franken and Kalsbeck (1975), p. 146.

⁶⁷ LaGro and de Haas (1989–90).

⁶⁸ Maier and Wartburg (1983), p. 314.

⁶⁹ Ashtor (1981), p. 97. A detailed contemporary description of sugar processing is given in Nuwayrī (1923–92), viii, p. 270.

rim differs in each case). The largest vessel (A.326 [11.1]) would have had a volume of *c.* 9.4 litres and the smallest (A.1286 [11.9]) a volume of *c.* 2.4 litres. The majority of the sugar pots from Karak appear to have a similar diameter to A.3384 [10.5], and thus should have similar capacity (*c.* 5–7 litres). The largest number of pots from Karak conform to type II from Koukilia. The ceramic evidence suggests, therefore, that it was ‘*musciatto*’ sugar that was consumed in greatest quantities by the inhabitants of Karak castle.

Sugar pots and syrup jars are found in considerable numbers in the Jordan Valley and Dead Sea Ghawr, and smaller numbers are noted in the surrounding area (fig. 11).⁷⁰ Seven large sugar mills and twenty-five smaller installations have been located in the Jordan valley.⁷¹ The valley beneath Shawbak castle contains structures that some scholars have speculated may have functioned as sugar mills.⁷² This identification has not been demonstrated through archaeological investigation, however. The concentration of sugar pots at Karak is unusual because of the distance from the Ghawr, though sugar pots have been recovered from other sites not associated with the manufacture of sugar.⁷³ The occurrence of sugar pot and syrup jar fragments on sites outside of the Ghawr does indicate that sugar and syrup were transported, at least for short distances, in these ceramic containers. The presence of plaster on the interiors of some pots from Karak suggests occasional reuse after the sugar had been consumed.

Sugar pots from Karak (A.668 [10.9], A.807 [not illustrated], A.3384 [10.5]), a syrup jar from Karak (A.1099 [12.2]), and shards gathered

⁷⁰ Sugar pots and syrup jars have been reported from: Daliya region (Olami [1981], site 71), Dhibān (Winnett and Reed [1964], pl. 65.1, 4), Gazit region (Gal [1991], sites 13, 15, 40, 61), Ḥasbān (Sauer [1973], fig. 4.164), Jarash (Tholbecq [2000], pl. VIII.5), Jarash highway region (Leonard [1987], site 5, fig. 2.4, 5), Karak plateau (Miller [1991], fig. 446), Khalīl (Bennett [1972], pl. V:II.B.11; III.II.A.4), Mughārat al-Wārda (Coughenour [1976], pl. XXXII.1 LH bottom corner), Southern Ghawr, Khanzīra, Khirbat Shaykh ʿIsā and Ṭawāḥīm al-Sukkar (Rast and Schaub [1974], fig. 12; MacDonald 1992, pls. 29–33), Ṭabaqat Faḥl (McNicoll *et al.* [1982], II, pl. 125), Tabgha (Loffreda [1970], fig. 44.12, 13); Tal Abū Qa’dān (Franken and Kalsbeek [1975], figs. 42–45), Tal Abū Ṣarbūṭ (LaGro and De Haas [1989–90]), Tal Fandī (Kareem [1989], fig. 5), Tal Nimrīn (Dornemann [1990], fig. 1; Flanagan *et al.* [1994], fig. 17) and Wādī al-Yābis (Mabri and Palumbo [1988], fig. 14).

⁷¹ Hamarnch (1977–78); Brown (1992), p. 286. For recent work on the sugar factories at the south end of the Dead Sea, see Jones *et al.* (2000).

⁷² Brooker and Knauf (1988), p. 185.

⁷³ See n. 70 above: Daliya region, Dhibān, Gazit region, Ḥasbān, Jarash, Jarash highway region, al-Khalīl, Mughārat al-Wārda, and Tabgha.

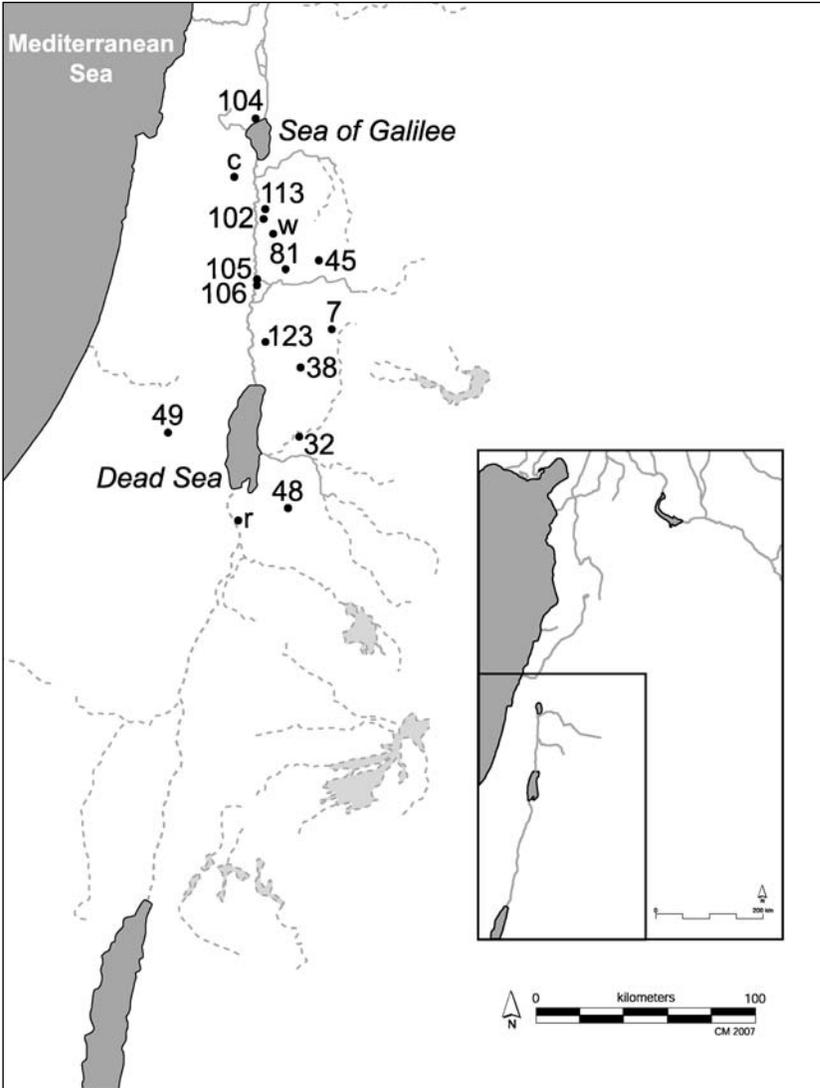


Figure 11. Distribution in Bilād al-Shām of sugar pots and syrup jars.

from Ṭawāḥīn al-Sukkar in Ṣāfiyya were submitted to petrographic analysis.⁷⁴ This study is described in greater detail elsewhere, but some of the main points may be summarised here. Of the Karak sugar pots, A.807 contained fine sand, carbonate and sandstone inclusions and did not relate to any other ‘petrofabrics’ tested. A.668 and A.3384 both contained basalt, carbonate and argillite inclusions, but A.3384 was distinguished by the type of quartz inclusions. A.688 contained foraminifer fragments not reported in the other sugar vessels.⁷⁵ The syrup jar (A.1099) shared the distinctive quartz and most other inclusions with one of the sugar pots from Ṣāfiyya. This last result indicates, unsurprisingly, that some of the sugar wares from Karak likely came from the sugar processing sites at the south end of the Dead Sea. The variation in ‘petrofabrics’ at Ṣāfiyya suggests that individual mills were supplied with vessels from more than one kiln or clay source.

Documentary sources probably give the best dating evidence for the Karak sugar pots and syrup jars (for a summary of these sources, see the section devoted to the Jordan valley and Dead Sea Ghawr in chapter 4). Historical sources indicate that the period of greatest production was the late thirteenth and fourteenth centuries. The decline in the manufacture in the fifteenth century probably had less to do with the breakdown of internal security and bedouin raiding as to the availability of cheaper sugar from Cyprus. It is probable that sugar manufacture largely ceased in the Ghawr by the turn of the sixteenth century.⁷⁶ Archaeological investigation of sugar production sites has tended to support this general dating. For instance, the comparanda from Tal Abū Qa’dān come from phases J-P dating—according to the revised chronology proposed by James Sauer—to the early Mamluk period (*c.* 1250–1401).⁷⁷ Further petrographic analysis would be required to ascertain whether any of the sugar pots and syrup jars from the Karak assemblage can be associated with sugar mills further north in the Jordan valley. There are reasons for supposing that for much of

⁷⁴ Mason and Milwright (1998).

⁷⁵ Although some correlation was noted with a kiln tripod collected in Shawbak. See Mason and Milwright (1998), pp. 180, 185.

⁷⁶ Ashtor (1981), pp. 112–20. As noted in chapter 4 one of the sugar mills at Ṭawāḥīn al-Sukkar was still functioning in the first half of the sixteenth century. This would indicate that some sugar pots at Karak could be assigned this late date.

⁷⁷ Franken and Kalsbeek (1975). According to the revised dating of the stratigraphy in Sauer (1976).

the Middle Islamic period the distribution of sugar from the Jordan valley was not controlled by Karak. By the 1340s Balqā' (and presumably also the Jordan valley) were no longer part of the administrative region of Karak.⁷⁸ Writing in the fifteenth century Qalqashandī notes that many of the sugar mills in the Jordan valley were administered by the offices of the sultan and that the sugar was sent to Damascus for further processing and resale.⁷⁹ It seems likely that relationship had existed earlier in the Mamluk period as well. A closer relationship can be demonstrated between Karak and the sugar production of the south and east banks of the Dead Sea.

Drainpipes and related items (Catalogue Pages 12–13, pp. 287–290 & 359–360)

Drainpipes and other types of ceramic pipe constitute 9% of the diagnostic unglazed wheelthrown.⁸⁰ The group can be split into two main types, large bore and narrow bore pipes. The first type ranges in diameter from 140–280 mm and are constructed in two basic ceramic fabrics. The first is a medium-soft, granular fabric with basalt, chert, and dark clay inclusions. The second fires slightly harder, is less brittle and contains larger mineral inclusions. Extensive calciferous build up was noted on the interior of some drainpipe sections indicating a long period of use. Some of the pipes with smaller bore may be handmade rather than wheelthrown. The greatest typological variation can be seen in the shape of the junctions at either end of the pipe.

Though references to the manufacture of drainpipes can be found in written sources such as the Cairo Geniza, few actual examples have been reported on excavations of Middle Islamic contexts.⁸¹ It is likely that such functional items were manufactured in large numbers in urban centres in this period. Drainpipes can still be seen *in situ* within Karak citadel itself while others have been excavated in the thirteenth- and fourteenth-century levels at Shawbak castle.⁸² Similar items have been located *in situ* in the twelfth-century palace, Qaṣr al-Banāt in

⁷⁸ Umarī (1988), p. 237.

⁷⁹ Qalqashandī (1913–18), iv, pp. 183, 190.

⁸⁰ Total = 147: A = 100, D = 5, F = 42.

⁸¹ Goitein (1958), pp. 188–89.

⁸² Brown (1988), p. 237, fig. 13.40, 41.

Raqqa/Rāfiqa,⁸³ the Mamluk citadel in Tripoli, and Qāqūn tower in the Sharon plain.⁸⁴

The great consistency of ceramic fabric, shape and scale exhibited in shards of types The group of smaller bore pipes are more varied in fabric, firing and profile. The thick bodies and narrow bores of A.1433 [12.10] and A.1434 [13.24] are possibly suited to the pumping of water at high pressure. A.3077 [15.28] and A.3082 [15.27] have no parallels in the published pottery from Middle Islamic contexts. The holes punched through the body of A.3077 [15.28] are perhaps designed to allow the escape of smoke or steam. The narrow bore pipes may have been used in a bath complex.

Ibrīqs and other small to medium containers (Catalogue Pages 13–16, pp. 288–297 & 360–363)

Diagnostic shards from water jars (s. *ibrīq*) and other small to medium containers constitute 3% of the total corpus and 8% of the diagnostic unglazed wheelthrown shards.⁸⁵ The most common type are *ibrīqs* constructed from a medium-soft, porous ceramic paste. The first group of *ibrīqs* have a bulbous body joined to a tall, narrow neck. All are thrown with thick walls. The shape of the neck and rim are subject to considerable variation. One or two handles and a spout are affixed to the neck and shoulder of the container. Filters and surface decoration are uncommon in vessels made from this soft ceramic paste. The second group is composed of smaller vessels thrown with thin walls. They are more diverse in ceramic fabric, construction, firing, profile, and decoration. The second group also includes a distinctive type of reduction-fired grey ware with very thin walls and pin-pricked decoration (A.3060 [14.16], A.3061 [14.13], and A.3062 [14.14]). One thin-walled buff juglet (A.1387 [14.15]) contained a delicately-cut filter, a feature sometimes seen unglazed pottery from Damascus, Jerusalem and Ḥamā.⁸⁶

⁸³ The kilns of Raqqa evidently produced drainpipes of different dimensions from the Abbasid period until at least the end of the eleventh century. See Miglus (1999), pl. 61; Milwright, in preparation.

⁸⁴ Tripoli (personal observation); Pringle (1986), p. 76 (site 36). See also the 'Arab tower' at Ba'albak (Sarre [1925], p. 95, fig. 105).

⁸⁵ Total = 248: A = 140, C = 6, D = 5, F = 97.

⁸⁶ Al-'Ush (1961–62), fig. 5.34; Tushingham (1985), fig. 39.2, 4; Riis and Poulsen (1957), figs. 943, 965.

A large number of *ibrīq* fragments were recovered from the Karak assemblage reflecting the constant requirement for these functional items throughout the Middle Islamic period. Production of unglazed water storage vessels at or near to Karak was illustrated by the find of the footring (F.6888 [not illustrated]) that had warped and cracked as the result of excessive heat during the firing. This piece, and the other examples of wasters and kiln furniture from Karak were subjected to petrographic analysis by Robert Mason. The petrographic samples suggested some degree of continuity in ceramic pastes, though the results were inconclusive. Like the lead-glazed waster, A.3802 [not illustrated], the unglazed footring was found to contain significant quantities of basalt. The ceramic fabric of unglazed waster was, however, distinguished from the glazed example by the presence of carbonate.⁸⁷ The neck of an unfired vessel (A.3519 [16.3]) was also found, though neither the profile of the neck nor the ceramic fabric bore any relation to the remainder of the *ibrīqs*.⁸⁸ In general, the ceramic pastes vary in fineness and specific mineral inclusions, but all are fired to ensure a durable, but porous fabric (the evaporation of water from the surface of the vessel serves to keep the liquid inside cool). The absence of ornament on most examples (except the 'pin-pricked' style) indicates that these objects were manufactured for utility rather than display.

In terms of numbers, the most important group at Karak are the medium sized *ibrīqs* that would have been used for the storage and serving of water and other drinks. They are relatively uniform in fabric and potting, with little attention given to ornamentation. Numerous comparanda can be identified in the archaeological record. The distribution pattern for this group of medium sized, undecorated buff fabric *ibrīqs* is concentrated in Palestine, with some examples located in Syria and east of the Jordan valley and Dead Sea Ghawr.⁸⁹ While the finds

⁸⁷ Mason and Milwright (1998), pp. 179, 186. The interpretation of the mineral inclusions in F.6888 is complicated by the fact that the excessive firing temperature has vitrified much of the fabric.

⁸⁸ Mason and Milwright (1998), pp. 179–80.

⁸⁹ Comparable examples are reported from Abū Ghawsh (De Vaux and Steve [1950], pl. G.32–33), Athlith region (Ronen and Olami [1978], site 82, fig. 19.15), 'Ayzariyya (Saller [1957], pl. 117.6), Dayr Mar Saba (Patrich [1994], site 47, fig. 1), Gazit region (Gal [1991], site 61, fig. 3.2), Ḥamā (Riis and Poulsen [1957], figs. 990–93), Har Hamran region (Haiman [1993], p. 17), Jerusalem, Armenian Garden (Tushingham [1985], figs. 41.37, 42.13), Jerusalem, Damascus Gate (Wightman [1989], pl. 59), Karak (Brown [1989], fig. 6.12), Khalīl (Bennett [1972], pl. X:V.G.2), Khirbat Fāris (McQuitty *et al.* [2000], figs. 11, 12, 17, 18), Ma'anit region (Ne'eman [1990],

are concentrated on urban sites, the presence of significant quantities of *ibrīq* shards in a cistern at Khirbat Fāris should caution against the assumption that the occupations of villages in Middle Islamic Jordan did not make extensive use of wheelthrown pottery.⁹⁰ Outside of Bilād al-Shām other examples are known from Quṣayr Qadīm, and it seems likely that this type of *ibrīq* was also ubiquitous on Egyptian sites.⁹¹ Large numbers of plain *ibrīqs* are reported in Jerusalem and the cemetery at Tal al-Ḥasī, and the presence of numerous typological variants at these two locations perhaps suggests that minor differences of rim and neck profile should not be taken as a reliable indicator of date or provenance. *Ibrīqs* are found in fourteenth-century contexts in the ‘reception hall’ at Karak, and the Armenian Garden in Jerusalem. Field 1 at Tal al-Ḥasī has been dated by the excavators to *c.* 1400–1800,⁹² and so there is nothing to rule out the continuation of production of these items into the Ottoman period.⁹³ The manufacture of similar *ibrīqs* in present-day Jordan illustrates the long lifespan of some ceramic designs.

There is greater variation in form and technique in the remainder of the group of medium to small scale containers. As with the previous examples the distribution pattern is concentrated in Palestine and Jordan. Correspondences in profile and ceramic fabric have been identified with monochrome lead-glazed wares (see chapter 7). These similarities may indicate that the production of the unglazed and lead-glazed vessels was coeval. The ‘pin pricked’ style of ornament is reported on finely potted wheelthrown wares from other sites in Bilād al-Shām and Egypt.⁹⁴ The contexts at the Armenian Garden in

site 33, fig. 1.10), Qubayba (Bagatti [1947], fig. 28.2–5), Šāṭāf (Gibson *et al.* [1991], fig. 23.3), Tabgha (Loffreda [1970], fig. 43) and Tal al-Ḥasī (Toombs [1985], pl. 83.1, 2; Eakins [1993], pl. 110).

⁹⁰ M. Sarley-Pontin in McQuitty *et al.* (2000), pp. 188–89.

⁹¹ Whitcomb and Johnson (1982), pl. 39.c.

⁹² Toombs (1985), pp. 114–16.

⁹³ For a survey of unglazed pottery in the Ottoman period, see Milwright (2000), pp. 195–96.

⁹⁴ Examples of this style are reported from ‘Ayn Kārim (Bagatti [1948], pl. 26, photo 57.1, 3), ‘Ayzariyya (Saller [1957], pl. 130b.8, 12, 13, 15), Burj al-Aḥmar (Pringle [1986], fig. 48.29–31), Damascus (al-‘Ush [1961–62], pls. 2.2, 6, 8; 7.43), Damascus, Bāb Sarīja (Toucir [1973], pl. IVB.a, b), Ḥamā (Riis and Poulsen [1957], figs. 943, 944, 946, 947, 1113), Hasbān (Sauer [1973], fig. 4.162), Jerusalem, Armenian Garden (Tushingham [1985], fig. 43.1–8), Jerusalem, Church of the Ascension (Corbo [1965], figs. 114.4; 115.3, 4), Jerusalem, Damascus Gate (Wightman [1989], pl. 61.1–6), Quṣayr Qadīm (Whitcomb and Johnson [1982], pl. 39.p–v), Southern Ghawr, Khirbat Shaykh ‘Isā (MacDonald [1992], pl. 31.s), Tal Abū Qa‘dān, phases K, Q, R (Franken and Kalsbeek

Jerusalem and Tal Abū Qa‘dān would date these wares from the thirteenth to fifteenth century. This ware occurs in greatest numbers in the south of Bilād al-Shām although reports from Quṣayr Qadīm and Tripoli indicate that the distribution pattern may be wider. While Gaza region was a centre for the production of reduction-fired grey wares in the nineteenth and twentieth centuries,⁹⁵ these vessels tend to be more heavily constructed and lack the fine decoration found on the grey wares from Karak. Petrographic analysis of A.3061 14.13] found that the ceramic contained a type of impure sand quite unlike the rest of the Karak pottery sampled.⁹⁶ The possibility that these fine grey-ware vessels were imported into the Karak region—perhaps from the coast of Palestine—should not, therefore, be excluded.

Bowls (Catalogue Page 15, pp. 292–294 & 362)

Open bowls are less common than closed vessel forms constituting 4% of the diagnostic unglazed wheelthrown shards.⁹⁷ Bowls range in diameter from 60 to 260 mm. Most are made from medium-hard fabrics firing from pale green to buff or pink. The range of mineral inclusions varied, but with basalt, chert and carbonate common to all examples. Bowl profiles fall into three basic categories, hemispherical bowls with a straight rim, bowls with an everted rim, and carinated bowls. All the bowls are supported on low footings.

Unglazed wheelthrown bowls are found in relatively low numbers in Karak. Most of the vessel shapes reported in this group have close correspondences in form with slipped and unslipped monochrome lead-glazed bowls (see chapter 7). Rims, bases, and complete profiles from monochrome lead-glazed bowls account for 554 shards in contrast to the fifty-four unglazed wheelthrown bowl shards in the Karak assemblages. The addition of a lead glaze would have made the interior surface of a bowl less porous and thus better suited for the serving of food or drink. What purpose the unglazed bowls were meant to fulfil

[1975] figs. 35.32; 36.28, 40), Tal Jimna (Schaefer [1989], fig. 9.25–27), and Tripoli (Salamé-Sarkis [1980], pl. LXVII.5–17).

⁹⁵ Gatt (1885); Rosen cited in Toombs (1985), pp. 106–107; Brown (1992), pp. 216–17, n. 1; Schölch (1993), pp. 164–65. The production of grey wares in Gaza and nearby sites may date back as far as the seventeenth century. See Rosen and Goodfriend (1993).

⁹⁶ Mason and Milwright (1998), pp. 180–81, 187.

⁹⁷ Total = 57: A = 31, B = 3, C = 7, D = 7, F = 9.

is unclear: unglazed wheelthrown bowls are uncommon also in rural assemblages in southern Jordan; the low densities on rural sites may be because handmade vessels fulfilled the same range of functions. The distribution pattern for unglazed wheelthrown bowls is focussed in the south of Bilād al-Shām.⁹⁸ A cluster of occurrences around the south end of the Dead Sea,⁹⁹ may indicate either that these items were brought from Palestine into Jordan via this route or that ceramics of this type were manufactured in the Southern Ghawr region. Comparanda can be located in thirteenth- and fourteenth-century contexts from Buṣrā, the Armenian Garden in Jerusalem, and Karak. Perhaps most significant is the relationship of form and scale with monochrome lead-glazed wares from Karak. It seems likely that the two types were produced coevally.

Miscellaneous items (Catalogue Pages 10, 13–16, pp. 285–286, 288–297 & 357, 360–363)

Four examples of lids are represented in the catalogue (F.5914 [13.27], F.5983 [13.26], F.6007 [13.25] and F.6113 [13.28]). F.6007 is a small lid constructed of a hard red fabric with few visible mineral inclusions and may be of Byzantine date. The rest of the lids are constructed of medium-hard, well levigated fabrics firing buff to pale green.¹⁰⁰ A.1263 [13.4] may be a ceramic stand for pots or trays (no comparanda for this object are known to the author).¹⁰¹ F.5574 [10.4] is a pinched spout from

⁹⁸ Examples are reported from Abū Ghawsh (De Vaux and Steve [1950], pl. G.14, ‘Ayzariyya (Saller [1957], fig. 56), Buṣrā (Berthier [1985], fig. 50, Gazit region (Gal [1991], site 59, fig. 1.1), Greater ‘Ammān region (Abu Dayyah *et al.* [1991], fig. 9.13), Jerusalem, Armenian Garden (Tushingham [1985], figs. 35.1; 41.6), Karak (Brown [1989], fig. 5.8), Khaḥlī (Bennett [1972], pl. IX.V.A.14), Ramla (Kaplan [1959], fig. 3B.7), Southern Ghawr, Fayfā’ and Khirbat Shaykh ‘Isā (MacDonald [1992], pl. 32.v; 30.k), Ṭabaqat Faḥl (Smith [1973], pl. 72.967), Wādī ‘Arab (Hanbury-Tenison [1984], pl. 17.8).

⁹⁹ MacDonald (1992).

¹⁰⁰ Few unglazed wheelthrown lids have been published from Middle Islamic contexts in Bilād al-Shām. Lids of various shapes are reported from tenth- and eleventh-century contexts at Abū Ghawsh (De Vaux and Steve [1950], pl. B.15, 16) and in Middle Islamic occupation phases at the Armenian Garden in Jerusalem (Tushingham [1985], figs. 36.5–9; 43.12). Comparison can also be made with purple-glazed cream ware lids recovered from Quṣayr Qadīm (Whitcomb and Johnson [1982], pl. 33.g).

¹⁰¹ Tray stands are known in this period in metalwork, Cairene Mamluk sgraffito and Chinese ‘blue and white’ porcelain. See ‘Abd al-Rāziq (1988), fig. 5; Carswell (1966), pls. 1–5; Allan (1982), no. 19. None of the published pieces in these different media has the same profile as the Karak example.

a large open vessel constructed of a hard, poorly levigated fabric. A hole has been bored through the body just below the spout while a layer of plaster has been added to the exterior after firing. A.3499 and A.3500 [not illustrated] are body shards which have been reshaped after firing into the form of flat discs, perhaps for uses as counters or weights.¹⁰² A small group of probable Roman-Byzantine shards was also noted in the Karak assemblage. A.3514 [16.5] and A.3517 [16.4] are both constructed of hard, well levigated fabrics which produce a metallic ring when struck. Another group of body shards [not illustrated] are constructed from hard, brown fabric with regular carbonate and basalt inclusions, and have repeated corrugations on the exterior. Although the latter are probably Byzantine in date, similar wares are reported in eleventh- to thirteenth-century contexts at Burj al-Aḥmar¹⁰³ and 'Afūla,¹⁰⁴ perhaps indicating the continuance of this style of unglazed pottery into the Middle Islamic period.

Section 3: Relief-moulded Unglazed and Stamped Unglazed Wares
(*Catalogue Page 16, pp. 294–297 & 363*)

Unglazed pottery decorated by relief moulding or decorative stamps constitutes 0.3% of the total assemblage.¹⁰⁵ Relief-moulded unglazed wares exhibits a wide variation in ceramic fabric, technique of manufacture, scale, form, and decoration. The presentation of the evidence is split into four sections according to vessel function: 1) medium to large containers; 2) slipper lamps; 3) sphero-conical vessels; and 4) tobacco pipes.

Medium to large containers (Catalogue Page 16, pp. 294–297 & 363)

Included in this group are canteens (often known as 'pilgrim flasks') and globular jugs with high necks. The canteens are constructed from light, porous and well levigated fabrics firing pale green to buff in colour. Fine sand, carbonate, chert and basalt inclusions were found in the petro-

¹⁰² The practice of reshaping body shards into discs is attested elsewhere in the Islamic world and in medieval Europe. See comments in Milwright (2004).

¹⁰³ Pringle (1986), p. 142.

¹⁰⁴ Dothan (1955), p. 27.

¹⁰⁵ Total = 28: A = 22, F = 6.

graphic analysis of A.4103 [16.7].¹⁰⁶ The pale brown ceramic fabrics of the jug fragments are harder, less porous with sand and carbonate inclusions. Petrographic analysis of A.4116 [not illustrated] revealed the presence of quartz, carbonate, foramifer and brown clay inclusions.¹⁰⁷ In both the canteens and the jugs, a combination of wheelthrowing, relief-moulding and hand formation was used in the construction of the finished vessels.¹⁰⁸ In both types of vessel the decoration consists principally of schematic vegetal forms. The jug shards both exhibit the remains of bands of pseudo-epigraphic ornament. The background of the letters is filled with a dense pattern of repeated circles. In addition, there is a small group of shards from larger, coil constructed vessels which have been ornamented with decorative stamps and incisions (A.4120–23 [16.13–15]). The decorative stamps employed on this small group of large vessels is varied, comprising rosettes, stylised leaf forms and an animal motif (possibly a lion). The absence of technical, functional, and stylistic similarities between the relief-moulded unglazed containers suggests that the production of canteens, jugs, and large vessels was not located at the same urban workshops.

Relief-moulded unglazed canteens also appear on the Karak plateau at Khirbat Fāris.¹⁰⁹ They are also reported in Middle Islamic contexts and field surveys elsewhere in the Levant.¹¹⁰ Relief-moulded unglazed jugs appear on one other site on the Karak plateau,¹¹¹ and are ubiquitous in the Middle Islamic Bilād al-Shām (fig. 12).¹¹² Perhaps the most

¹⁰⁶ Mason and Milwright (1998), p. 181.

¹⁰⁷ Mason and Milwright (1998), p. 181. The 'petrofabric' was found to have some similarities with the shard of sgraffito pottery (A.4079).

¹⁰⁸ For a discussion of the method of construction, see Franken and Kalsbeek (1975), p. 40, fig. 5; Kalsbeek (1991–92).

¹⁰⁹ 1994 season, unpublished.

¹¹⁰ Examples are reported from 'Afūla (Dothan [1955], fig. 8.1), Aleppo (al-'Ush [1969], fig. 135), 'Ayzariyya (Saller [1957], pl. 117.8), Ba'albak (Sarre [1925], figs. 25, 26, 28, 29), Damascus, Šālihiyya (Sauvaget [1932]; al-'Ush [1960–63]), Ḥamā (Riis and Poulsen [1957], figs. 879–940), Jerusalem, Church of the Ascension (Corbo [1965], figs. 114.6, 7; 115.8), Mīnā (Lane [1938], pl. XX.2d), Nahalal region (Raban [1982], site 33, fig. a.10), Qaṣr al-Ḥayr East (Grabar *et al.* [1978], pls. A–G), Quṣayr Qadīm (Whitcomb and Johnson [1982], pl. 39.c–g), Ruṣāfa (Logar [1991], fig. 3.7), and Tripoli (Salamé-Sarkis [1980], pl. LXVII.18–24, 26).

¹¹¹ Miller survey, site 238 (personal observation).

¹¹² Examples are reported from Ba'albak (Sarre [1925], figs. 14, 16), Damascus, Bāb Sharqī (Contenau [1924], pl. XLIX), Damascus, Šālihiyya (al-'Ush [1960], fig. 3.14; al-'Ush [1961–62], figs. 2.4, 8; 3.16; 4.21, 25; al-'Ush [1963], fig. 12.61; 13.68, 69), Ḥamā (Riis and Poulsen [1957], figs. 857–74), Jabal al-Ṭūr (Battista and Bagatti [1976], fig. 28.1), Jerusalem, Armenian Garden (Tushingham [1985], figs. 35.37, 38;

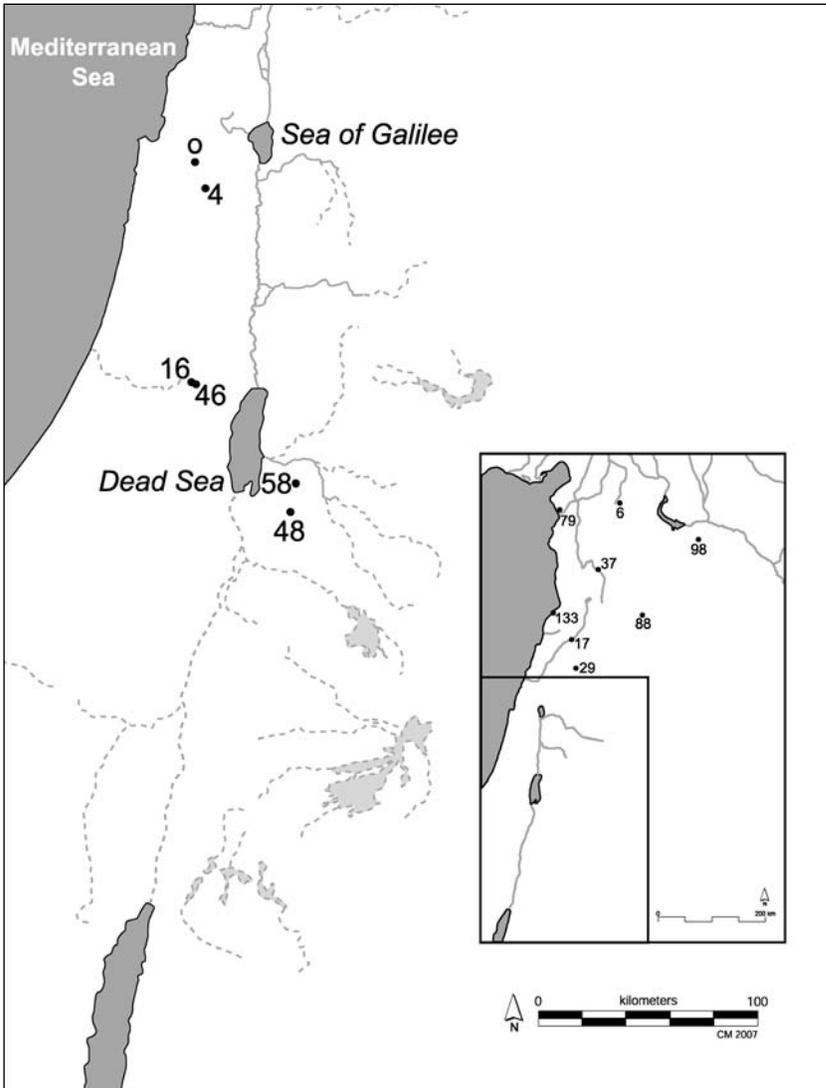


Figure 12. Distribution in Bilād al-Shām of relief-moulded unglazed canteens and jugs.

significant aspect of these two distribution patterns is the concentration of both vessel types on urban sites. In addition, the available archaeological evidence indicates that most relief-moulded unglazed canteens and jugs were produced in workshops located in towns and cities. A plaster mould for the manufacture of canteens was discovered during the excavation of the Church of the Ascension, Jerusalem,¹¹³ while the remains of a fourteenth-century workshop with moulds and relief-moulded unglazed vessels was unearthed during clandestine excavations in the district of Šāliḥiyya in Damascus in the 1930s.¹¹⁴

Relief-moulded unglazed jugs, with and without spouts, appear in Early Islamic contexts in the Levant,¹¹⁵ but similar items were produced in the region at least until the end of the fourteenth century. Relief-moulded unglazed jugs appeared at the Armenian Garden in Jerusalem in excavated contexts dating to the late twelfth/early thirteenth and the later fourteenth centuries.¹¹⁶ At present, the comparative material for the Karak relief-moulded unglazed jugs does not allow for a more precise dating than to the thirteenth or fourteenth century. Features such as the prominent epigraphy and raised circle decoration on A.4104 [16.8] and A.4105 [16.9] and the profile of the spout (A.4119 [16.12]) suggest that these items were meant to imitate metal vessels.¹¹⁷

A.4120–23 [16.13–15] are all shards from larger vessels, probably containers for water or other liquids. Ornamental stamps are a rare decorative feature on large vessels in the Middle Islamic period, and few comparanda exist for the designs found on the Karak shards.

44.14), Jerusalem, Church of the Ascension (Corbo [1965], figs. 114.1; 115.2, 9), Naḥal Yattir (Govrin [1991], site 211, fig. 1.4), Qaṣr al-Ḥayr East (Grabar *et al.* [1978], pl. A-8.15.13), Ramla (Kaplan [1959], fig. 3A.6), Ruṣāfa (Legner [1964], pl. 4; Logar [1991], fig. 3.21, 23, 24), and Tal Saylūn (Andersen [1985], pl. 5.93).

¹¹³ Corbo (1965), fig. 115.1.

¹¹⁴ Sauvaget (1932), p. 5, pls. 2–4. The dating of the workshop was based upon the presence of simple and composite Mamluk blazons on some of the relief-moulded shards. For further moulds from Damascus, see al-'Ush (1960), figs. 57–65.

¹¹⁵ For instance, both shards from relief-moulded jugs and the moulds used to make them have been excavated in association with Abbasid period kilns at Raqqā. See Milwright (in preparation). Also Gonnella in Miglus (1999), pp. 55–75, pls. 78–88.

¹¹⁶ Tushingham (1985). The two contexts are dated by the excavators to 1212 or 1214–1219 or 1227 and *c.* 1363–77 respectively. The 'Ayyubid' phase at the site has recently been redated by Mason. He suggests that this earlier phase may have started earlier, probably the mid twelfth century. See Mason (1997), p. 185.

¹¹⁷ Cf. Ayyubid and Mamluk ewers in Atıl (1981), pp. 72–73, no. 19; Atıl, Chase and Jett (1985), nos. 47, 48. For the general issue of Islamic ceramics imitating metalwork. See Tabbaa (1986); Raby (1986).

Simple geometric stamps are also seen primarily on smaller closed vessels on Frankish occupation phases on Palestinian sites such as Abū Ghawsh,¹¹⁸ and ‘Ayzariyya.¹¹⁹ Depictions of animals, such as that found on A.4122 [16.15], are rare in the Karak assemblage. The animal in this case may be a lion or panther, though, in the absence of further evidence, there seems no reason to link this with the blazon images of the Mamluk sultan, Baybars. The motif may be found nearby on the inscription band of the Burj al-Banawī in Karak (pl. 19). In terms of dating, however, a general shift away from zoomorphic representations can be detected in the minor arts of the Mamluk period after *c.* 1300.¹²⁰ On this basis, this piece may be tentatively dated to the end of the thirteenth century.

Slipper lamps (Catalogue Page 16, pp. 294–297 & 363)

A.4106–09 [16.16–19] and F.7682 [not illustrated] are relief-moulded slipper lamps. These simple lamps are made by pressing two flat sections of clay into decorated moulds.¹²¹ All are amygdaloid with a small, spur-shaped handle at the back of the lamp. In other respects they differ in aspects of preparation of the ceramic fabric, and the nature and fineness of the moulded decoration.

Slipper lamps of this basic form are familiar from the seventh to the tenth century in Egypt and Palestine.¹²² It is not clear from the available archaeological evidence whether the production of slipper lamps continued in the following two centuries, but they certainly appear again in significant numbers in excavated contexts of the thirteenth century and later in Bilād al-Shām. While earlier lamps often use a wide vocabulary of vegetal, zoomorphic or epigraphic motifs, Middle Islamic lamps are generally distinguished by the predominant employment of abstract geometric ornament. Middle Islamic slipper lamps are reported from excavations in Karak citadel,¹²³ and other sites on

¹¹⁸ De Vaux and Steve (1950), pl. XVIII.1.

¹¹⁹ Saller (1957), pl. 129.b.

¹²⁰ The growth of abstraction in fourteenth-century Mamluk art is discussed in Jake-man (1993).

¹²¹ For a discussion of this technique, see Franken and Kalsbeek (1975), p. 40, fig. 6.

¹²² See the typologies of lamps from Fustāṭ and Baysān. Kubiak (1970), type A: pp. 3–6, fig. 1; Hadad (1999), type 1: pp. 203–11, figs. 2, 3.6; 6; 7.

¹²³ Brown (1989), fig. 6.25.

the Karak plateau.¹²⁴ Slipper lamps have also been recovered elsewhere in Bilād al-Shām in contexts dating between thirteenth and fifteenth century (fig. 13).¹²⁵ Archaeological work has provided some additional dating evidence; for instance, a lamp mould at the Armenian Garden in Jerusalem is reported from a context containing coins dating to the rule of sultan Sha'bān (1363–77).¹²⁶

The ubiquity of slipper lamps on sites all over the Levant suggests that these objects had a relatively low unit cost, while the crude preparation of the clay and the thick body of A.4106 [16.16] and A.4108 [16.18] suggest that individual lamps were often made and considerable speed and with little care. The poor quality of the moulded detail on these examples may result from the use of 'second-generation' moulds made by pressing a fired lamp into wet clay (rather than carving out a new design). The strong similarity between the patterns of A.4106 [16.16], A.4109 [16.19], F.7682 [not illustrated] with examples from Damascus and Sabastīyya¹²⁷ poses interesting questions about the manufacture and distribution of slipper lamps. It may have been itinerant craftsmen and moulds rather than the finished lamps themselves that were transported. This method of distribution would explain the pronounced differences in the ceramic fabrics and preparations of lamps with very similar relief decoration. This question cannot be resolved without detailed examination of lamp fragments from different sites, however. One lamp from Karak was subjected to petrographic study to see whether the fabric exhibited any significant correlations with the wasters and kiln furniture found on the site. Analysis of A.4106 [16.16] indicated, however, that

¹²⁴ Miller (1991), fig. 458. Also sites 211, 270, 304, 427 (personal observation of the Miller survey material).

¹²⁵ Examples are reported from Abū Ghawsh (De Vaux and Steve [1950], fig. 33.1, 6), Fūla (Kedar and Pringle [1985], fig. 4.3), Bayt Sāhūr (Tzaferis [1975], pl. 20.6–9), Burj al-Aḥmar, phase E (Pringle [1986], fig. 47.34), Damascus, Ṣālihiyya (al-'Ush [1961–62], fig. 8.49), Dhibān (Tushingham [1972] fig. 8.7: undecorated shard), Ḥayfā, St. Mary of Carmel (Pringle [1984a], fig. 5.9), Ḥasbān (Boraas and Horn [1973], pl. XIVa), Jerusalem, Armenian Garden (Tushingham [1985] figs. 43.17; 45.1–3), Jerusalem, Damascus Gate (Wightman [1989], pl. 62.1–4), Khalīl (Bennett [1972] chapter IV), Qubayba (Bagatti [1947], fig. 34.1–9), Sabastīyya (Crowfoot *et al.* [1957], fig. 89.7), Tabaqat Faḥl (Smith [1973], pl. 58.57), and Tal Sahl al-Ṣarābaṭ (Suleiman and Betts [1981], pl. LXIII.1).

¹²⁶ Tushingham (1985), fig. 45.5, and see description of fig. 43.17.

¹²⁷ Al-'Ush (1961–62), fig. 8.49; Crowfoot *et al.* (1957), fig. 89.7. See also Kedar and Pringle (1985), fig. 4.3; Tzaferis (1975), pl. 20.7; Knowles in Harper and Pringle (2000), fig. 8.2.35.

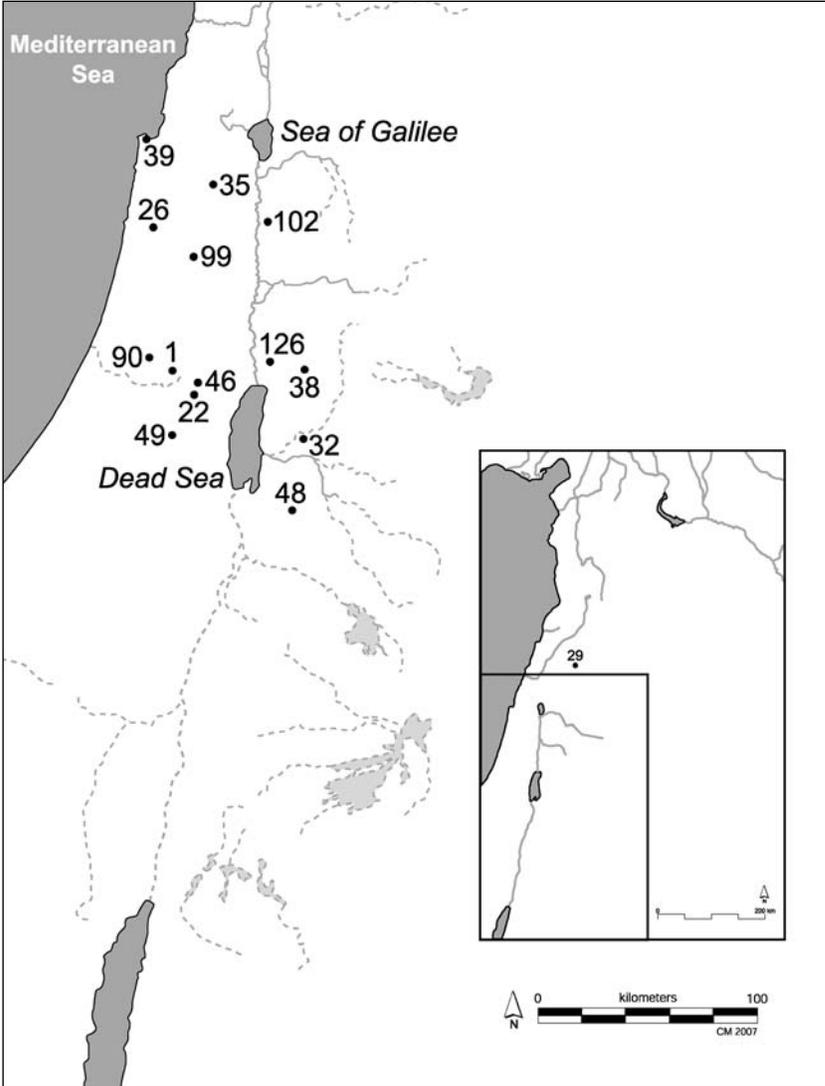


Figure 13. Distribution in Bilād al-Shām of relief-moulded unglazed slipper lamps.

the clay was unlike that of other unglazed and glazed earthenwares from the Karak ceramics submitted for testing.¹²⁸

Sphero-conical vessels (Catalogue Page 16, pp. 294–297 & 363)

A.4124 [16.21], F.7683 [16.20], F.7684 [16.22] are shards from sphero-conical vessels. The ceramic fabric of all examples is very hard and dark grey-green in colour. The very high firing temperature has caused vitrification of the quartz material both inside the fabric and on the surface of the vessel. As a result, no mineral inclusions were visible in the broken edges. The concentric ridges visible on the interior indicate that the vessels were wheelthrown, perhaps around a wax core.¹²⁹ Stamped and incised decoration was added when the vessel was leather hard with a small ovoid stamp. Broad vertical incisions have been also been made on the exteriors of A.4124 [16.21] and F.7693 [16.22].

Emilie Savage-Smith has proposed a preliminary typology for sphero-conical vessels of both ceramic and glass.¹³⁰ Her typology consists of ten basic classifications. Unglazed containers constructed from the types of dense, very hard clays encountered at Karak fall into two basic categories, types 4 and 5. Both types are piriform with thick walls and a small internal capacity. The neck has a narrow mouth (usually no more than 4–5 mm in diameter). The neck of type 4 examples is a rounded knob with a recessed collar at the junction with the shoulder. The neck of type 5 examples has a similar profile but without the recessed collar. Type 5 examples are simply decorated with ‘fish-scale’ stamps and incised vertical lines. The addition of glaze is only rarely attested.¹³¹ The Karak shards have closest affinities with type 5. Type 4 and 5 sphero-conical vessels have been found together (sometimes in association with other types) on Levantine sites (fig. 14).¹³² A collection

¹²⁸ Mason and Milwright (1998), pp. 181, 187.

¹²⁹ Savage-Smith (1997), p. 229.

¹³⁰ Savage-Smith (1997).

¹³¹ Hauser and Wilkinson (1942), p. 90; Lane (1947), pl. 36b.

¹³² Examples of type 4 and 5 vessels are reported from Kawm al-Dikka in Alexandria (Marzouk [1959], fig. 21), Ba‘albak (Sarre [1925], fig. 66.3; 67.1), Bālis (Savage-Smith [1997], p. 232, n. 4), Damascus, Šālihiyya (al-‘Ush [1960], pls. 4.22; 5.22, 23a, 23b), Hamā (Riis and Poulsen [1957], figs. 849–53, 1050; Pentz [1988], figs. 2, 5), Jabal al-Tūr (Battista and Bagatti [1976], figs. 21–23), Jerusalem, Armenian Garden (Tushingham [1985] figs. 38.18, 19; 43.18, 19; 45.6–10, 25, 26), Jerusalem, Church of the Ascension (Corbo [1965], fig. 114.5, 9), Jerusalem, Damascus Gate (Wightman [1989], fig. 62.9–11), Jerusalem (Prag [2006], fig. 4); and Qūşayr Qadīm (Whitcomb and Johnson

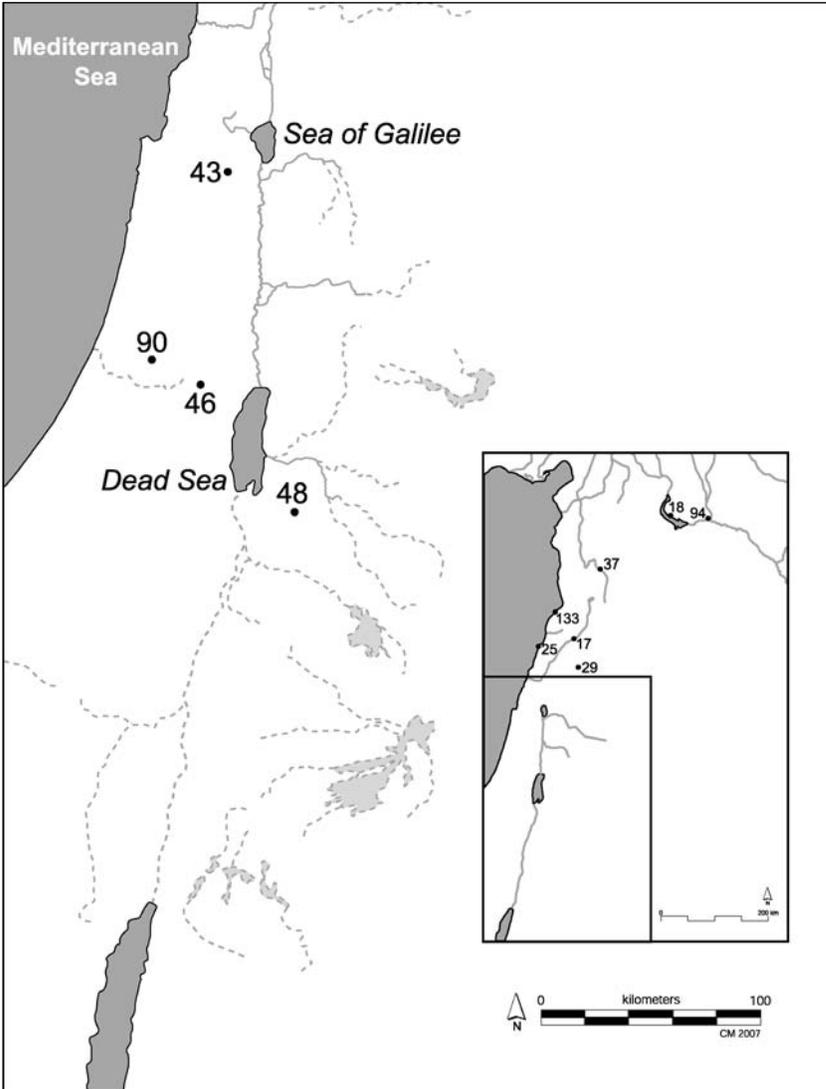


Figure 14. Distribution in Bilād al-Shām of type 4 and type 5 sphero-conical vessels.

of complete sphero-conical vessels of unspecified type is reported from 'Ajlūn castle, while substantial numbers have recently been unearthed in the citadel of Damascus.¹³³ These two groups are interesting for their occurrence in fortifications, and certainly military functions have been proposed for this enigmatic vessel type.

Richard Ettinghausen lists numerous other sites in the Islamic world where sphero-conical containers of unspecified types are found.¹³⁴ At Nishapur excavators discovered examples of sphero-conical vessels corresponding to Savage-Smith's types 1, 2, 4, 5, 6. They noted that examples corresponding to Savage-Smith type 4 (and wasters) were found in large numbers around the kilns.¹³⁵ Wasters of sphero-conical vessels of types 3, 4 and 7 are also reported from Samarqand.¹³⁶ Petrographic analysis of A.4124 [16.21] indicates the specific mineral content is consistent with a provenance in the south of Bilād al-Shām, and so the possibility that the Karak sphero-conical vessels were imported from the eastern Islamic world can probably be discounted.¹³⁷ The common occurrence of type 5 vessels in Palestine and Syria may point to a production site in the region. One type 5 sphero-conical vessel is reported from Tripoli stamped with the words, 'bi-ḥamā.'¹³⁸ A specialised clay may have been required to withstand the very high firing temperature needed for the production of these items.¹³⁹ The clay from Jabal Bishr was employed in Aleppo for the manufacture of smelting pots used in iron foundries, and it is possible that this a potential source for the manufacture of sphero-conical vessels.¹⁴⁰

[1979], pl. 37.k; Whitcomb and Johnson [1982], pl. 49.i-l). Type 4 containers have been found separately at Laǰjūn (Brown [forthcoming] figs. 7a, 7b). Type 5 containers are reported at Beirut (Turquety-Pariset [1982], fig. 4.23, 24), Beirut, Downtown excavations (Lebanese University, unpublished), Jerusalem, Birkat Isrā'īl (Chester [1884], fig. on p. 537), Jerusalem, Zion Gate (Broshi and Tsafirir [1977], fig. 5.1), Qubayba (Bagatti [1947], photo 55.11); Raqqa (Lane [1947] pl. 36f), Tripoli (Salamé-Sarkis [1980], pl. LXIX.1-12). Another example of this type is reported from an unspecified location Upper Egypt (Denon [1802], pl. 98, no. 31).

¹³³ Brown in Miller (1991), p. 237. The Damascus sphero-conical vessels appear in contexts dating from the twelfth to the fourteenth century. These artefacts will be published in forthcoming studies by Véronique François and Stephen McPhillips.

¹³⁴ Ettinghausen (1965), p. 218.

¹³⁵ Wilkinson (1973), pp. 323-24, 353, pls. 109-17.

¹³⁶ Ghouchani and Adle (1992), p. 92; Savage-Smith (1997), p. 228, n. 5.

¹³⁷ Mason and Milwright (1998), pp. 181-84, 187.

¹³⁸ de Saulcy (1874), p. 20. See also Pentz (1988), pp. 93-94, fig. 5.

¹³⁹ Petrographic analysis found that the high firing temperature had caused much of the quartz in the ceramic fabric to vitrify. See Mason and Milwright (1998), pp. 81-84.

¹⁴⁰ Yāqūt (1866-70), I, p. 631.

Sphero-conical vessels appear to have been manufactured from the ninth until the fourteenth century. Type 4 and 5 sphero-conical vessels are found in twelfth- and thirteenth-century levels at Jabal al-Ṭūr, the Armenian Garden in Jerusalem, Lajjūn, and Quṣayr Qadīm. Thirteenth- and fourteenth-century deposits containing type 4 and 5 vessels or shards include Ḥamā, the Armenian Garden in Jerusalem and Qubayba. The upper strata of Kawm al-Dikka, in which the sphero-conical containers were discovered, is described by excavators as dating from the twelfth- to fifteenth-century, though the devastation caused by a Frankish naval raid on the city in *c.* 1365 may represent the last date of deposition on the site.¹⁴¹ The majority of the locations reporting sphero-conical vessels are either cities, ports, castles, or sites which are associated with the annual *hajj* such as Lajjūn. The socio-economic profile of these sites is consistent with the picture of sphero-conical containers as specialised items of high unit cost and perhaps involved in the transport of valuable commodities.

The functions proposed for sphero-conical vessels divide into five main groups, grenades, aeolipyles, beer bottles, flame throwers, and containers for mercury or some other valuable liquid.¹⁴² Most scholars dealing with this subject have mistakenly asserted that ceramic sphero-conical vessels represent a single class of objects designed to perform a single function. In contrast, the typology presented by Savage-Smith emphasises the differences in form, fabric and construction. Type 4 sphero-conical containers from Nishapur were found to hold ‘volatile liquids, water and oil for weeks without seepage’ and to be ‘so hard that, thrown with full force against a stone floor, they seldom break’ (the latter observation presumably being based on practical experimentation!)¹⁴³ The ceramic also seems to be able to withstand repeated exposure to high temperatures and great pressure. They were found in association with kilns at Bālis and Nishapur.¹⁴⁴ Experiments have shown that the

¹⁴¹ Marzouk (1957), p. 18.

¹⁴² Ettinghausen (1965) gives a summary of articles dealing with this subject from the nineteenth and early twentieth century. Important studies after 1965 include: Rogers (1969); Brosh (1980); Ghouchani and Adle (1992); Savage-Smith (1997). See also Ādahl (1987) and Pentz (1988). The latter’s interpretation is, however, based upon a misreading of a text on incendiary devices written for Ṣālāḥ al-Dīn. See Cahen (1947–48).

¹⁴³ Hauser and Wilkinson (1942), p. 89.

¹⁴⁴ Wilkinson (1973), pp. 323–24; Savage-Smith (1997), p. 232, n. 4. A group of about 200 sphero-conical vessels have been found in recent excavations of the pottery and glass manufacturing area east of modern Raqqā. It should be noted, however, that none exhibited signs of having been subjected to high temperatures after the initial fir-

small aperture makes vessels impossible to fill with viscous liquids and that liquid contained within can only be expelled in drops.¹⁴⁵ A type 5 sphero-conical container from Sidon was found to contain a residue of mercury and beeswax and other vessels from Russia appear to have been used for the same purpose.¹⁴⁶ In view of the conflicting evidence, it is difficult to conceive of a single function which will embrace the evidence assembled for type 4 and 5 sphero-conical vessels.

Tobacco pipes (Catalogue Page 16, pp. 294–297 & 363)

Seven fragments from Ottoman tobacco pipes were identified in the Karak assemblage (all the pipes were found in area A). The pipes are all of the *chibouk* type and are manufactured from highly levigated, dense ceramic fabrics. The whole apparatus of the tobacco pipe would be constructed from three sections: a clay pipe head, a hollow wood or reed stem, and a mouthpiece made either from clay or other media. A.4110–14 and A.4117 [16.23–28] are from the pipe section and A.4115 [16.29] is probably a mouthpiece. The pipe head divides into the bowl and the shank end. Four of the five pieces are from the shank while A.4114 [16.28] is a shard from the bowl of a pipe. A range of carved, stamped and incised decoration can be seen on the Karak pipes. A.3209 [16.6] may be part of a *narghile*.

The *terminus ad quem* for all tobacco pipes in the Middle East is the beginning of the seventeenth century; the time at which the plant was first imported to Turkey and Egypt. During the Ottoman period cities such as Istanbul, Sofia, Varna, Thebes, and Yiannitsa were celebrated for the production of clay pipes.¹⁴⁷ Although some clay pipes from Jerusalem contain hashish residue,¹⁴⁸ there is no reason to suppose that the types of clay pipes found commonly all over the Islamic world predate the introduction of tobacco from Europe in *c.* 1600.¹⁴⁹ The distribution

ing. It seems more likely that they were manufactured on site for the storage of some liquid (or perhaps fine powder) commodity. Milwright (in preparation).

¹⁴⁵ Hauser and Wilkinson (1942), p. 90.

¹⁴⁶ Chester (1884), p. 538; Ettinghausen (1965), p. 219.

¹⁴⁷ Robinson (1985), pp. 149–53; Hayes (1980), p. 4.

¹⁴⁸ Robinson (1985), pp. 150–51; Simpson (1990), p. 6.

¹⁴⁹ Tobacco pipes have been located in (contaminated) strata dated by excavators to the fourteenth century in Palestine and Syria. For instance, see Hamā (Riis and Poulsen [1957], pp. 280–81) and Tal Qaymūn (Ben-Tor and Rosenthal [1978], p. 70).

of clay pipes in the Islamic world is widespread but, until recently, the publication of excavated material from Ottoman occupation levels on Levantine sites was patchy.¹⁵⁰ Tobacco pipes have been located on sites on the Karak plateau,¹⁵¹ while other finds have been reported all over the Levant.¹⁵²

Hayes has created a preliminary typology of pipe heads gathered from Sarāḡhane, Istanbul.¹⁵³ His typology is based upon two basic features: the colour of the ceramic and the internal volume of the pipe bowl. The earliest pipes from Istanbul are made in a pale grey fabric and with a long shank (see Hayes types I, xvii, xxi). The only possible example of this type from Karak is A.4117 [16.27]. A.4110–4113 [16.23–26] are all examples of grey wares with shorter shanks (see Hayes types III, iv, ix, xxvi), representing the second stage of the evolution of the *chibouk*. All these examples are probably datable to the seventeenth century.¹⁵⁴ A.4114 [16.28] is a darker grey fabric with a burnished red slip (Hayes types v and vi) and is probably of eighteenth-century date. The red ware shard (A.4115 [16.29]), possibly a mouthpiece, has no parallels in the Hayes typology. A.3209 [16.6] is made of a coarser clay and may be later in date. The move from a grey ceramic fabric to red appears to occur at the end of the seventeenth century.¹⁵⁵

The time taken over the manufacture suggests that pipes had a high unit cost and the number of suitable clay sources may have been limited. At the same time, pipes could have been transported in bulk at relatively low cost. These factors would argue in favour of a small number of workshops (production centres are known in Turkey, Greece and possibly Egypt) distributing these wares over a wide geographical range. The coarser ceramic of A.3209 and A.4115 may be due to the use of Syrian or Palestinian clay to produce cheaper *chibouks* for a local market.¹⁵⁶ Workshops of the ‘makers/sellers of pipe stems’ (*cubukçu*) are

¹⁵⁰ Silberman (1989), pp. 231–34; Milwright (2000).

¹⁵¹ Miller survey, site 435 (personal observation). Also unpublished finds from Mudaybīr and Khirbat al-Nakhl.

¹⁵² For summary of the finds of tobacco pipes in Bilād al-Shām, see Milwright (2000), appendix: table 1; Simpson in Harper and Pringle (2000), pp. 147–71; Simpson (2002).

¹⁵³ Hayes (1980), pp. 4–8 and fig. 1.

¹⁵⁴ See also Simpson in Harper and Pringle (2000), pp. 147–49.

¹⁵⁵ Robinson (1985), p. 153.

¹⁵⁶ Finds of very crude pipes from southern Jordan that in more remote areas, smokers had to fashion their own pipes out of local clays. See Milwright (2000), p. 200.

recorded in the *sūq* built by Zāhir al-‘Umar in ‘Akka,¹⁵⁷ though this is not direct evidence for the manufacture of the clay pipes themselves. By the nineteenth century there is literary evidence for extensive tobacco pipe production in the Palestinian towns of Nāṣira and Jerusalem, but the sources do not make clear how long the craft had previously existed in each town.¹⁵⁸

¹⁵⁷ ‘Awra (1936), p. 370. I am grateful to Ruba Kana‘an for drawing this passage to my attention.

¹⁵⁸ Schölch (1993), pp. 127, 130, 149.

CHAPTER SEVEN

GLAZED CERAMICS

Introduction

The Karak assemblages (areas A–F) contained a relatively high percentage of glazed ceramics (approximately 34% of the total number of shards catalogued). This figure is considerably in excess of any other settlement recorded by the Miller survey of the Karak plateau (never more than 5%, and usually less than 2% of the total assemblage per site) and is also greater than the quantities encountered in Brown's excavation of the 'reception hall' in Karak castle (*c.* 9% of the excavated assemblage in phases 1 and 2).¹ A limited number of the glazed vessels from areas A–F were probably manufactured locally (these consisting exclusively of monochrome lead-glazed vessels), with the remainder being imported into Karak. Workshops in Palestine, Jordan and Syria account for the vast majority of the glazed ceramics found in Karak, though some high-value pieces were transported to the site from regions as far afield as Italy and southeast China.

The discussion of the glazed wares from Karak is split into three sections: lead-glazed wares; alkaline-glazed wares; and Chinese imports. While the terms 'lead-glazed' and 'alkaline-glazed' are imprecise, neither fully taking account of the wide variability of glaze chemistry that has been encountered in scientific analysis of Islamic glazed pottery of different periods and regions,² this division is still useful as a means to distinguish between two distinct technological traditions in Islamic pottery making (the major characteristics of each group is discussed in greater detail in the introduction to each section). To state it in the most basic terms, the lead-glazed wares from Karak (that is, those which employ a glaze where lead is the principal fluxing agent) tend to have thin, transparent and more reflective glazes. Lead-glazing is used exclusively on vessels made from conventional clay fabrics. The

¹ Brown (1989), table 3.

² For instance, see Tite *et al.* (1998); Mason (2004).

alkaline-glazed wares have thicker, glassy glazes which may be transparent or opaque (the latter being rare). This category includes glazes that are fluxed entirely with alkaline compounds as well as a few examples that may combine these compounds with roughly equal amounts of lead. The ceramic bodies of the alkaline-glazed category include a few examples of fine, pale earthenwares and other earthenwares that contain with large quantities of ground quartz or sand added as a temper. The great majority of the alkaline-glazed wares are made from stonepaste fabrics.

The Karak lead-glazed and alkaline-glazed wares are classified into conventional ware types according to characteristics of technique and mode(s) of decoration. The Chinese imports in section 3 comprise mainly celadon ('green ware') and blue and white porcelain, though some other types are also encountered.

*Section 1: Lead-glazed Wares (Catalogue Pages 17–27, pp. 297–324
& 364–374)*

Lead-glazed wares are common, comprising 23% of the Karak assemblage.³ The principal method of construction is wheelthrowing, with hand-shaping and mould-casting occasionally employed. The earthenware fabrics vary considerably in the degree of levigation, nature and extent of the mineral inclusions, texture, and the fired colour. Pieces may be slipped or unslipped. Many Middle Islamic bowls are slipped only on the interior and the upper part of the exterior. In some cases potters sought to use a pale cream slip to contrast with the brick red colour of the fired earthenware, but in others the slip is virtually indistinguishable in colour from the body of the vessel. Microscopic examination of a cross section through one lead-glazed shard from Karak revealed that the slip clay was, in fact, virtually identical in composition to the clay of the body.⁴ As a result, it is often difficult to determine in the cases of many buff-bodied, monochrome lead-glazed shards whether the original vessel had been self-slipped or unslipped. The glaze is composed of a silica base (sometimes simply a clay slurry) and a lead flux, usually litharge (PbO) or galena (PbS). The lead flux lowers the

³ Total = 1,871: A = 616, B = 78, C = 70, D = 242, E = 15, F = 850.

⁴ See the analysis of A.3802 in Mason and Milwright (1998), p. 179.

melting point of the glaze to below 1150°C.⁵ Minerals may be added to the glaze to create colour—iron oxide for ochre to brown, copper oxide for green, and manganese compounds for dark brown or purple. Due to the viscous quality of lead glazes during firing, areas of colour are usually loosely applied with no intention of creating recognisable patterns on the surface of the vessel.⁶ More precise linear detail might well be added with slip-painting, sgraffito technique (incising through the slip), stamping or relief-moulding.

The presence of spur marks on the interiors of many glazed bowls indicate that they were separated in the kiln using clay tripods/trivets. One example of a tripod was found in the Karak assemblages (see below). While it appears to have been common practice to employ a biscuit firing and a second glaze firing in the production of Syrian lead-glazed pottery up to the twelfth century,⁷ no evidence was found in the lead-glazed pottery from Karak to suggest the common employment of two firings. Certainly, with the cruder plain lead-glazed pottery it seems likely that the vessels were always manufactured using a single firing. Middle Islamic lead glazes can have a glassy, metallic sheen but, more commonly, the surface is roughened by impurities. Discolouration of the glaze might also result from uneven temperature or changes in atmosphere in the kiln. Ubiquitous faults noted in lead-glazed wares from Karak include spalling, crazing of the glaze surface, and poor adherence of the glaze to the ceramic body (particularly in the case of thickly slipped vessels).

This section is split into wares that have been defined in previous archaeological literature: 1) plain (monochrome) glazed; 2) glaze-painted; 3) slip-painted; 4) sgraffito; and 5) relief-moulded glazed wares (including those with stamped decoration under the glaze).

⁵ The composition and firing temperatures of lead glazes are discussed in Tite *et al.* (1998). See also Rice (1987), p. 99.

⁶ Further colours can be obtained from iron as a colorant by varying the atmosphere and temperature in the kiln. My thanks to David Walker for this information. These findings appear in his Master's thesis submitted at the Department of Archaeology of Nottingham University in 2001.

⁷ See, for instance, the decorated lead-glazed pottery produced in Raqqa during the eleventh century. Numerous examples of biscuit-fired shards with incised slip decoration but no glaze were found during excavations at Tal Fukkhār. See Milwright, in preparation.

Plain lead-glazed ware (Catalogue Pages 17–21, pp. 297–309 & 364–368)

Plain lead-glazed pottery is the most common of the glazed wares at Karak. This ware comprises of 21% of the total assemblage and 90% of the lead-glazed shards.⁸ A wide variety of ceramic fabrics has been identified in the examination of this group. The vessels may be slipped, self-slipped or unslipped. Though a single glaze colour is employed on most of shards, some examples are bichrome with different glaze colours on the interior and exterior. A wide range of vessel types is reported in the monochrome lead-glazed wares from the Karak assemblage, comprising both open and closed forms. Most of the shards are from bowls with the remainder consisting of closed vessels, frying pans, and lamps.

Footed bowls (catalogue pages 17–20) constitute the majority of the diagnostic shards in the plain lead-glazed group.⁹ Bowls vary in diameter (80–280 mm) but all are supported on footrings. The rim shards from the Karak assemblages can be split into the following categories: curved bowls with straight rims, curved bowls with folded over rims, curved bowls with inverted rims, bowls with flange rims, bowls with splayed rims, and carinated bowls. The bases comprise straight-sided vertical, flared with straight sides, flared bases with curved sides, and low cushion types.

The vast majority of the 522 rim and base shards come from bowls of medium size (diameter 150–250 mm), and most of these were probably utilised for the serving of food. Many variations of ceramic fabric, slip, and glaze colour are apparent. Statistical analysis reveals little correlation between these different factors (glaze colour to vessel profile and so on), but some general comments can be made about this group of ceramics. The majority (73%) of the bowls are slipped either on the entire surface or on the interior only. The lack of a visible slip was usually related to characteristics such as poor preparation of the ceramic fabric, patchy glazes and uneven firing. Spalling is a common firing fault on unslipped wares. Mason's petrographic analysis of the waster from the self-slipped lead-glazed bowl (A.3802 [not illustrated]) found that it was made from a related ceramic fabric to a waster from an unglazed *ibrīq* (F.6888 [not illustrated]).¹⁰ Significantly, the fabric of

⁸ Total = 1619: A = 545, B = 73, C = 8, D = 224, E = 5, F = 769.

⁹ Total = 522: A = 231, B = 17, C = 5, D = 43, E = 5, F = 217.

¹⁰ Mason and Milwright (1998), pp. 179, 186.

the glazed object is actually less well levigated than that of the unglazed example. Such glazed bowls were probably cheap, locally manufactured items that employed a glaze simply to reduce the porosity of a poorly prepared ceramic paste.

In general, the standards of production on the slipped lead-glazed vessels are higher than those of the unslipped/self-slipped group. Some slipped bowls exhibit signs of being manufactured to much higher specifications (e.g. A.3643 [17.11], A.3715 [18.1], A.3644 [18.23], A.3687 [18.22], and A.3724 [18.19]). Characteristic features of this latter group are harder, better levigated ceramic pastes (usually firing pink or red in colour), a thin body, the application of a thick cream coloured slip, and an evenly applied, glassy glaze. The presence of slip and glaze over interior and exterior and the use of bichrome glazing are also observed in this group. The ceramic fabrics, glazes, and vessel profiles of some examples of these high quality plain lead-glazed wares correspond to other types of decorated lead-glazed pottery. A good example is the in-turned rim of A.3724 [18.19], a feature commonly associated with relief-moulded lead-glazed bowls (see catalogue pages 23–25). It is plausible that pottery workshops in Palestine may have produced lead-glazed bowls of the same basic profile in both plain and decorated versions.¹¹

The archaeological record indicates that plain lead-glazed bowls were produced in Islamic Bilād al-Shām for a considerable period. In the north of Syria plain lead-glazed bowls appear in small numbers in contexts dating to the tenth-twelfth century along with other decorated lead-glazed wares.¹² Other rare examples of undecorated monochrome lead-glazed bowls are reported from contemporary contexts in northern Palestine (though, again, most of the finds have glazed-splashed, sgraffito or slip-painted ornament).¹³ None of these appear to be similar to the types of lead-glazed bowls found at Karak. Examples corresponding to the Karak bowls first appear in the late twelfth century at sites such

¹¹ There is archaeological evidence for the firing of different types of pottery within a single kiln. For instance, the pottery workshop discovered at Khirbat al-Burj near Jerusalem which produced both green lead-glazed wares and lamps. See Onn and Rapuano (1995).

¹² For instance, finds from Tal Fukkhār in Raqqa (Milwright [in preparation]) and Tal Shahīn (Tonghini [1995], p. 202, fig. 4). Plain lead-glazed pottery is also reported on surveys in northern Syria. See Bernus-Taylor (1981), p. 474.

¹³ Oren (1971); Stern and Stacey (2000), p. 174, fig. 3.7.

as Wu'ayra,¹⁴ and a greater number of reports comes from contexts dating to the thirteenth and fourteenth centuries.¹⁵ At present, it is not possible to say whether there was any stylistic or technical evolution of plain lead-glazed bowls during the thirteenth and fourteenth centuries. Franken and Kalsbeek note a shift from the predominant use of yellow glaze in phases H–N to the use of green in the later phases (O–T) at Tal Abū Qa'dān, but the validity of this observation has not been tested elsewhere.¹⁶ The archaeological record for the period from the fifteenth to the eighteenth century remains difficult to interpret, but it appears that on many sites lead-glazed pottery ceases to form part of the ceramic assemblage.¹⁷ In Palestine new types of lead-glazed pottery make their appearance in the eighteenth and nineteenth centuries,¹⁸ but the excavated ceramics from many rural sites in Jordan continue to be dominated by handmade pottery until the twentieth century.¹⁹

The ubiquity of plain lead-glazed shards on the sites of the Karak plateau (particularly those villages located near the Karak or along the route of the King's Highway) indicates that these bowls were both relatively cheap and readily available to both urban and rural populations during the thirteenth-fourteenth century. The wide variety of ceramic fabrics, vessel forms and glaze colours, coupled with the considerable degree of qualitative differentiation in the Karak assemblages suggests that plain lead-glazed wares in the town and citadel were imported from a variety of manufacturing centres. As noted above, the presence of one plain lead-glazed waster (A.3802 [not illustrated]) and a kiln tripod splashed with green glaze (A.4064 [16.2]) provide evidence of

¹⁴ Brown (1987), p. 279, fig. 10.28.

¹⁵ For instance, Hasbān (Sauer [1973], fig. 4.134–37), Karak, phase I (Brown [1989], fig. 5.2–3), Khirbat Fāris (Johns *et al.* [1989], figs. 25.36; 26.37, 44, 45), Shawbak, phase III (Brown [1988], fig. 12.28, 29), Tal Abū Qa'dān, phases H–T (Franken and Kalsbeek [1975]. Stratigraphy redated in Sauer [1976]), and Tī'innik, strata 5–12 (Ziadeh [1995], p. 211, figs. 15.13; 16.2, 4, 6. See also redating of these strata in Milwright [2000], p. 192). Plain lead-glazed pottery is also found in late twelfth- and thirteenth-century contexts on Crusader sites in Palestine, although the profiles of the bowls differ from those found on contemporary Muslim sites in Transjordan. For instance, Burj al-Aḥmar (Pringle [1986], fig. 49.50–57) and Caesarea (Pringle [1985], p. 177, fig. 3.12–15).

¹⁶ Franken and Kalsbeek (1975), pp. 136–37.

¹⁷ For instance, Burj al-Aḥmar (Pringle [1986], p. 146), Ṣaṭaf (Gibson *et al.* [1991], pp. 44–45), Shawbak (Brown [1988], pp. 237–40) and Wu'ayra (Vannini and Tonghini [1997], p. 378).

¹⁸ For instance, 'Akka (Edelstein and Avissar [1997], pp. 132–33), Kabrī (Kempinski and Neimeier [1994], 49, figs. 22.3; 23.10–15) and Zī'rīn (Grey [1994], p. 60).

¹⁹ Parker in De Vries (1998), pp. 215–18 and notes.

production in the vicinity of Karak citadel,²⁰ but this local industry did not satisfy the demand for these wares on the site or in the villages of the plateau. Kilns producing lead-glazed pottery have been found at the south end of the Dead Sea²¹ and in Jerusalem,²² and these sites may have produced some of the pieces found at Karak. Doubtless, other local and Palestinian workshops were also producing the bowls found in the castle.

Frying pans (catalogue page 18) take the form of wide, shallow vessels with a slightly curved base and steep sides. Usually, there are two small ledge handles attached to the exterior, just below the rim. The fabric contains some large carbonate inclusions and fires pale brown. The glaze is applied only on the interior, and on the examples from Karak the unglazed exteriors are heavily charred. Given the practical nature of this vessel type, it is surprising that so few examples (A.3734 [18.5], D.5315 [18.9]) appear in the Karak assemblages. Shallow frying pans are common on sites in Palestine but to the east in Jordan occurrences are much rarer. The relationship with the Italian *tegame* is noted by Pringle,²³ and many examples are associated with twelfth- and thirteenth-century (Frankish) occupation levels in Palestine.²⁴ Significantly, at the Armenian Garden in Jerusalem and Qubayba frying pans were absent from fourteenth-century deposits.²⁵ The dating and distribution evidence suggests that shallow frying pans are associated principally with Frankish occupation phases. Some of the globular pots (both unglazed and plain lead-glazed) may have been intended as cooking vessels (see below). Alternatively, on a site such as Karak castle copper and bronze vessels may have been employed for the bulk preparation of food.

²⁰ A kiln tripod was also found during the excavation of a cistern at Khirbat Fāris. 1994 season, unpublished.

²¹ King *et al.* (1987), pp. 443, 447–48. Wasters of green-glazed pottery found at Ṭawāḥīm al Sukkar II and Khirbat Shaykh ʿIsā. See also Whitcomb in MacDonald (1992), p. 115.

²² Onn and Rapuano (1995). See also reference to an unpublished kiln in Jerusalem in Stern (1995).

²³ Pringle (1985), p. 176.

²⁴ For instance, see ʿAthlith (Johns [1936], fig. 14.5), Caesarea (Pringle [1985], fig. 3.9, 10), Jerusalem, Armenian Garden (Tushingham [1985], fig. 36.12–14), and Qubayba (Bagatti [1947], fig. 29.16, 17). At Burj al-Aḥmar glazed cooking pots appear in both phase C (c. 1191–c. 1265) and phases D and D1 (c. 1265–1390). See Pringle (1986), pp. 135–36, fig. 48.45, 46.

²⁵ See also comments in Brown (1992), pp. 283–84.

Closed vessels (catalogue pages 19–20) account for only thirty-nine rim, neck or base shards and twenty-six body shards.²⁶ All are constructed of relatively hard, well levigated fabrics and may be slipped or unslipped. The interior is glazed in all cases but not always the exterior. Both monochrome and bichrome glazing are reported. Incised lines are added into the unglazed surface on the exteriors of two shards (A.3807 [19.14], A.3808 [19.15]). Two basic types of closed vessel can be detected in the rim shards: jars with a narrow tapered neck, and globular containers with an out-turned lip. The former type is the more numerous.

Lead-glazed closed vessels are rare in Middle Islamic contexts in Bilād al-Shām.²⁷ Lead glazes are unsuited for the storage of acidic liquids because lead compounds are liberated from the glaze,²⁸ but this danger was only established in the nineteenth century and does not necessarily explain the scarcity of such items in the Middle Islamic period. The high standards exhibited in the manufacture and glazing of closed vessels suggests, first, that these items had a higher unit cost than most of plain lead-glazed wares and, second, that they were intended for specialised functions.

Globular lead-glazed vessels may have functioned as cooking pots (although none from Karak exhibited signs of charring). Examples of this form are attested in twelfth- and thirteenth-century strata on sites in the south of Bilād al-Shām (occurrences are more common in Palestine than Jordan or Southern Syria).²⁹ The pots are rarer in the fourteenth century, but examples are recorded at Burj al-Aḥmar³⁰ and Buṣrā.³¹ These wares are also reported on surveys at Fayfā' in the southern Ghawr.³² The development of handmade globular cooking vessels may

²⁶ Total = 65: A = 36, B = 2, C = 2, D = 1, F = 24.

²⁷ Lead-glazed closed vessels are reported from: Abū Ghawsh (De Vaux and Steve [1950], fig. 32.15); Gazit (Gal [1991], site 15, fig. 1.6); Ḥamā (Riis and Poulsen [1957], fig. 833–37); Jerusalem (Avigdad [1983], fig. 302); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham [1985], fig. 41.42); Jerusalem, Damascus Gate (Wightman [1989], pls. 60.10; 65.8); Khirbat Fāris (Johns *et al.* [1989], fig. 25.36); and Ramla (Kaplan [1959], fig. 3.A.13; 3.B.3).

²⁸ Rice (1987), p. 100.

²⁹ Examples are reported at Caesarea (Pringle [1985], fig. 2.3, 4, 6–8), Dhibān (Tushingham [1972], fig. 7.25–27), Qubayba (Bagatti [1947], pp. 122–23), and Tal Qaymūn (Ben-Tor and Rosenthal [1978], fig. 6.12, 13).

³⁰ Pringle (1986), p. 146, fig. 48.36–44 (phases C, D. D1).

³¹ Berthier (1985), pp. 13–14, pls. 5.55–58.

³² Rast and Schaub (1974), no. 292.

have signalled the decline of the wheelthrown versions, at least in areas such as Jordan.³³ The porous quality of earthenware fabrics allows for the evaporation of water through the ceramic body thus cooling the liquid within. Glazed containers may have been used for substances such as oils or wine where seepage was not desired. Vessels may also have been suitable for dry foods, spices and medical preparations. Very little comparative material is available from excavations though, interestingly, a site of comparable administrative and economic status, Ḥamā, provides several examples of lead-glazed storage vessels. This evidence would point to a date in the thirteenth or fourteenth century.

The Karak assemblage contains only five examples of lead-glazed pinched nozzle lamps (catalogue page 21).³⁴ In all cases, the vessel has been wheelthrown into the shape of a shallow dish with a low disc base. The Karak lamps split into two distinct types. The first type (A.4100 [21.2]) has a nozzle formed by pinching the sides of the lamp while the clay is in a plastic state.³⁵ The second type (A.4099 [21.1], A.4101 [21.3], C.4881 [not illustrated], F.7658 [not illustrated]) has the same pinched nozzle but with the addition of a central well to hold the wick and a handle joining the well to the rim.³⁶ A.4102 [21.5] is a knob handle which may have formed part of a glazed slipper lamp.

Comparable material for the type 1 Karak lamps is available from Middle Islamic contexts in Syria and Palestine,³⁷ and one kiln producing unglazed pinched nozzle lamps has been identified in Jerusalem.³⁸ Karak type 2 lamps are also common in the south of Bilād al-Shām (fig. 15).³⁹ The dating of pinched nozzle lamps of this type is made

³³ Brown (1992), pp. 281–83.

³⁴ A = 3, C = 1, F = 1.

³⁵ Corresponding to type 13 in the Baysān lamp typology. See Hadad (1999), p. 220, figs. 5:22; 10:39. See also Kubiak 1970, type L.

³⁶ Corresponding to type 10 in the Baysān lamp typology. See Hadad (1999), p. 218, figs. 5:19; 10:36. See also Kubiak 1970, type J.

³⁷ Type 1 lamps are found at: ‘Athith (Johns [1934], pl. LVII, fig. 1.a); ‘Ayzariyya (Saller [1957], p. 189, nos. 202, 420, 422, pl. 109.b.34); Ba‘albak (Sarre [1925], p. 132, fig. 162); Damascus (Toueir [1973], pl. 113.j); Jerusalem, Damascus Gate (Wightman [1989], pl. 62.6); Qubayba (Bagatti [1947], pl. 22, photo 48.14); Ramla (Kaplan [1959], fig. 3A.11); Tal ‘Arqa (Dentzer and Thalmann [1973], pl. VI.3); Tal Rif ‘at Region (Bernus-Taylor [1981], fig. 256); and Tripoli (Salamé-Sarkis [1980], pl. LIX.2). Unglazed lamps of the same type are reported at: Dhibān (Tushingham [1972], fig. 8.22); Ḥamā (Riis and Poulsen [1957], fig. 1068); and Qubayba (Gichon and Linden [1984], type 8, fig. 2.f; pl. 21.f).

³⁸ Avigad (1978); Avigad (1983), fig. 300.

³⁹ Type 2 lamps are reported at: ‘Athlith (Johns [1934], pl. LVII, fig. 1.c); Ayla/‘Aqaba (Whitcomb [1988b], p. 24); Ba‘albak (Sarre [1925], fig. 132, fig. 63); Ḥamā

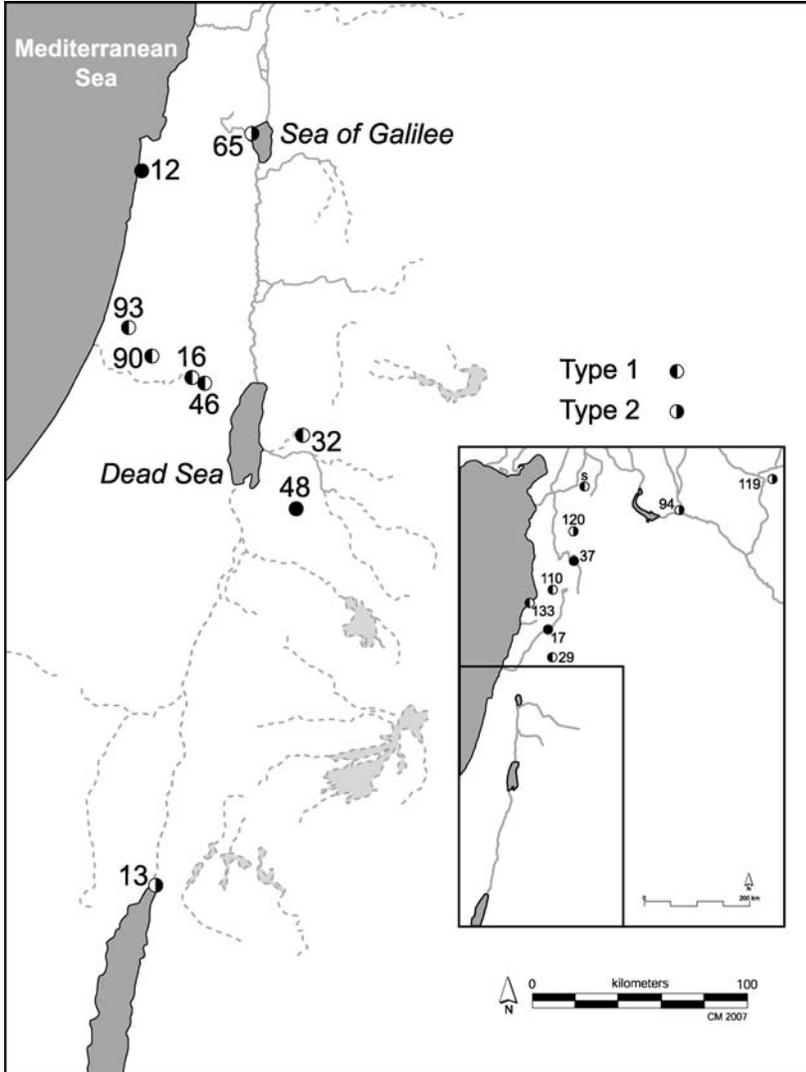


Figure 15. Distribution in Bilād al-Shām of lead-glazed lamps.

difficult by the lack of any obvious evolution in their form over time. The types of ceramic fabric and glaze used on the Karak examples are consistent with thirteenth- or fourteenth-century lead-glazed wares in the south of Bilād al-Shām.⁴⁰ While the Jerusalem kiln appears to have been used exclusively for the manufacture of lamps, there is no reason why these technically simple objects could not have been made and fired in association with unglazed or lead-glazed wares. It is surprising that so few are found in the Karak assemblage. In addition, no lead-glazed lamps are reported from the Karak plateau survey, and relief-moulded slipper lamps were found at only three sites.⁴¹ In the castle it is possible that lamps in other media may have substituted for ceramic items while handmade wares may have fulfilled the same function in villages.

A.4064 [16.2] is a ceramic kiln tripod with a largest dimension of 102mm and a greatest thickness of 21mm. The extant foot does not have the spurs often seen on kiln furniture of this period. Ochre-coloured debris is fused onto the surface and a small patch of transparent dark green lead glaze is visible on the foot. A.4064 was submitted to petrographic analysis along with a series of wasters from the Karak assemblages.⁴² Samples selected for testing included an unfired handmade fragment (A.3520 [not illustrated]), a lead-glazed waster (A.3802 [not illustrated]), unglazed wheelthrown wasters (A.3519 [16.3], F.6888 [not illustrated]), and a kiln tripod found in Shawbak castle. The aim of this selection was to identify a series of local 'petrofabric'. The analysis indicated that the clay of the Karak tripod may represent a less processed form of the ceramic fabrics seen in the unglazed (F.6888) and lead-glazed wasters (A.3802). It seems likely that potters would have spent less effort in the selection and preparation of the clay for tripods and this may account for the differences found in the petrographic analysis.

It is usually assumed that kiln furniture will remain on or near the production site. For this reason, tripods are taken to be good indicators of provenance and are utilised in ceramic analysis. There is, however, evidence that bowls were transported still connected in stacks and this would mean that kiln tripods could be found some distance away from

(Riis and Poulsen [1957], figs. 1064–67); Khirbat al-Minya (Grabar *et al.* [1960], fig. 30.20); Tal Malabiyya (Lebeau *et al.* [1985], fig. 1.5). Small glazed stonepaste lamps of this form dating to the eleventh or twelfth century are reported from Raqqa/Rāfiqa (Milwright [2005]); and 'Tal Minis' (Porter and Watson [1987], pl. 1).

⁴⁰ Hadad (1999), pp. 218–20.

⁴¹ Miller survey, sites 211, 270, 304.

⁴² Mason and Milwright (1998), pp. 179–80 (fabrics: Karak 1–5).

the kiln.⁴³ In the south of Jordan tripods have also been located at Khirbat Fāris⁴⁴ and Shawbak castle (see above). In addition, evidence of lead-glazed pottery production is noted in the Southern Ghawr region at Tawāhīn al-Sukkar II and Khirbat Shaykh ʿĪsā.⁴⁵

Glazed-painted ware (Catalogue Page 21, pp. 306–309 & 368)

There are only six shards of glaze-painted ware in the Karak assemblages.⁴⁶ All the shards have been covered with a pale slip prior to the application of the lead glaze. In the first group (F.7659 [21.7], D.5027, F.7660 and F.7745 [not illustrated]) the glaze colours are green and dark brown and in the second (F.7661 and F.7662 [not illustrated]) the glaze colours are green and ochre. The ceramic of the first group is quite brittle and the shards are too small to be able to reconstruct the original designs. The two groups identified in the Karak glaze-painted ware are distinct in technique and style. The green and brown shards are not related to other lead-glazed shards in the Karak assemblage. The second group is a variant upon the bichrome wares which are relatively common in Karak assemblage and the Karak plateau.⁴⁷ Glaze-painted and splashed wares of various descriptions are found on the Karak plateau,⁴⁸ and elsewhere in the Levant.⁴⁹

Slip-painted wares (Catalogue Page 21, pp. 306–309 & 368)

Slip-painted ware is rare in the Karak assemblages and constitutes c. 1% of the lead-glazed pottery.⁵⁰ The ceramic fabrics are medium-hard, well levigated with occasional basalt, sand, and carbonate inclusions,

⁴³ Robert Mason, personal communication.

⁴⁴ 1994 season, unpublished. For a preliminary report of the pottery from this season, see M. Sarley-Pontin in McQuitty *et al.* (2000), pp. 185–89.

⁴⁵ King *et al.* (1987), pp. 443, 448; Whitcomb in MacDonald (1992), p. 115.

⁴⁶ D = 2; F = 5.

⁴⁷ Miller survey, sites 12, 35, 108, 166, 202, 205, 206, 210, 267, 311, 369, 420, 435.

⁴⁸ Miller survey, site 166.

⁴⁹ Examples are reported from Burj al-Aḥmar, phase F (Pringle [1986], fig. 50.79), Jerusalem, Armenian Garden, 'Ayyubid' phase (Tushingam [1985], fig. 44.12), Jerusalem, Damascus Gate (Wightman [1989], pl. 65.12), Quṣayr Qadīm (Whitcomb and Johnson [1982], pl. 37), Ṣāṭāf (Gibson *et al.* [1991], fig. 23.8), and Tripoli (Salamé-Sarkis [1980], pl. L.3, 5).

⁵⁰ Total = 15: A = 5, B = 1, C = 3, D = 2, F = 4.

and firing brick red to brown. The slip clay is painted onto the interior in all cases and on parts of the exterior in most cases. The lead glaze is transparent ochre with occasional splashes of green. The style of A.4066 [21.12] shows some similarities to the vegetal designs found on some slip-painted ware from Fustāt,⁵¹ though it seems unlikely that it was imported from such a distance. The looser style of the remainder of the Karak shards is found on the Karak plateau,⁵² and elsewhere in Palestine and Jordan.⁵³ Similar loosely-painted designs can also be found on slip-painted wares of the Ottoman period, and it is possible that some of the Karak pieces date to this later phase.⁵⁴ The close correspondence of A.4067 [21.9] with a bowl from Jerusalem, Damascus Gate may point to a Jerusalem provenance for this piece. Slip-painted bowls decorated with geometric linear designs are common in southern Bilād al-Shām.⁵⁵ The published archaeological evidence suggests that this geometric style is associated with both Frankish and later occupation phases.⁵⁶ The distribution of this type of slip-painted ware is limited in central and southern Jordan.

Sgraffito wares (Catalogue Pages 21–23, pp. 306–313 & 368–370)

Sgraffito (slip incised) pottery is rare in the Karak assemblages comprising only *c.* 0.5% of the total assemblage and *c.* 2.5% of the lead-glazed pottery.⁵⁷ The sgraffito wares from Karak are technically and stylistically heterogeneous and the discussion is split into three basic categories: 1) wide incised; 2) narrow incised; and 3) Italian imports. With the

⁵¹ Scanlon (1980), pl. III. See also Atil (1981), no. 98.

⁵² Miller survey sites 108, 166, 211, 311, 369.

⁵³ Examples are reported from: Abū Ghawsh (De Vaux and Steve [1950], fig. 32.14); Jerusalem, Damascus Gate (Wightman [1989], pl. 66); and Southern Ghawr, Fayfā' (Rast and Schaub [1974], fig. 11.298. Cf. Ottoman-period examples in François (2002), fig. 2.9, 10 (Greek imports).

⁵⁴ Cf. examples from the Damascus citadel and Aphrodisias in Anatolia. See François (2001), pl. 12.121–34; (2002), fig. 2.9–10.

⁵⁵ Examples are reported from: Abū Ghawsh (De Vaux and Steve [1950], fig. 32.8, 9); Athlith (Johns [1935], pl. XXVII); Baysān (Zori [1966], pl. 10.f); Burj al-Aḥmar (Pringle [1986], fig. 50.64–68); Caesarea (Pringle [1985], fig. 6.34–36); Hayfā, St. Mary of Carmel (Pringle [1984a], figs. 6.48–50; 7.51–54); Ḥamā (Riis and Poulsen [1957], figs. 822–26, 829–31); Ḥasbān, 'Early Mamluk' phase (Sauer [1973], nos. 141, 142); Ṭabaqat Faḥl (Smith [1973], no. 1019); Tabgha (Loffreda [1982], fig. 10.2–4); and Tal al-Mutasallim (Schumacher [1908], fig. 269–71).

⁵⁶ Brown (1992), p. 278.

⁵⁷ T = 48; A = 29; B = 2; C = 1; D = 2; E = 1; F = 13.

exception of F.7672 [23.4], all the shards from the Karak assemblage are from footed bowls. Sgraffito is sometimes combined with other decorative techniques such as relief moulding (these examples are dealt with in the following section).⁵⁸

The majority of the shards are decorated in a distinctive, wide incised style, with the principal elements of the composition incised using a spatulate tool (*c.* 5–10 mm in width). The effect is similar to that of an italic nib, and has been variously dubbed ‘spatula-incised ware’, ‘gouged ware’ and ‘widely incised ware’. The decorative motifs tend to be limited, comprising repeated curvilinear marks or larger geometric shapes such as circles and chevrons. Absent from the decoration of this ware are epigraphic, vegetal or zoomorphic motifs. Occasionally, a sharper stylus is used to create finer lines. These widely incised sgraffito bowls exhibit common physical characteristics. The ceramic fabric tends to be brick red in colour, with a granular, brittle texture and regular small carbonate and black inclusions. One shard of this ware was submitted to petrographic analysis. It was found to contain a combination of quartz, micritic carbonate and argillite that was unlike any of the other samples from the Karak assemblage.⁵⁹ The cream-coloured, slightly gritty slip covers the interior and sometimes the upper part of the exterior. The glaze is restricted to the interior and is glassy but thin, with a tendency to crackle and flake. The principal glaze colours are yellow-ochre and green.⁶⁰ All the wide incised sgraffito shards in the Karak assemblage come from footed bowls of three basic types: bowls with curved sides and a folded over rim; bowls with a carination in the upper section; and shallow bowls with flange rims. All appear to be supported on low foot rings. One foot ring (A.4089 [4089]) was found to have been drilled through the foot prior to firing. This feature would have allowed the plate to have been hung on the wall, perhaps as an ornament.⁶¹

⁵⁸ For instance, A.4140, A.4160 and F.7698.

⁵⁹ Mason and Milwright (1998), p. 181 (‘Karak 9’). I have recently had the chance to examine wide incised sgraffito shards recovered from excavations in the Damascus citadel. The ceramic fabric of these examples does show some distinct differences to the Karak shards.

⁶⁰ Wide incised sgraffito is discussed in greater detail in Milwright (2003), pp. 87–91.

⁶¹ This feature can also be seen on another example of the ware from Tabaqat Faḥl. See Walmsley (2000), fig. 10.3. The practice of hanging plates on the wall is widespread around the east Mediterranean and East African coast. See comments in Milwright (2004a).

Wide incised sgraffito ware is reported in small numbers on the Karak plateau,⁶² and elsewhere in Bilād al-Shām (fig. 16).⁶³ Examples are known as far north as Tripoli on the coast and Damascus inland, but the majority comes from Balqāʾ and northern and central Palestine.⁶⁴ The relatively large assemblage from Karak appears to be unusual in southern Jordan, though possible examples may exist further south at the castle of Wuʿayra near Petra.⁶⁵ The evidence from excavations suggests that this ware was produced during the thirteenth century, and may have continued into the fourteenth.⁶⁶ In general, it does not appear in excavated contexts associated with Crusader occupation, and was probably mainly circulated among the inhabitants of areas under Ayyubid and then Mamluk control in the south of Bilād al-Shām. It is possible that the highly restricted decoration of these sgraffito bowls

⁶² Miller (1991), fig. 451. Brown ([1992], p. 275, n. 18) remarks that, of the approximately 20,000 ceramic shards collected in the Karak plateau survey, ‘less than half a dozen’ examples of wide incised ware were reported.

⁶³ Examples of this type of sgraffito ware are reported from: ‘Athlith region (Ronen and Olami [1978], site 116, fig. 6.1); Beirut (Anon. [1994], pl. on p. 16; el-Masri [2000], fig. 11); Belvoir castle (unpublished excavations cited in Pringle [1984a], p. 106); Burj al-Aḥmar survey region (Pringle [1986], sites 17, 28, 32); Caesarea (Pringle [1985], fig. 11.55; 12.65); Damascus, Bāb Šarīja (Toueir, [1973], pl. 1.d–g); Dhibān (Tushingham [1972], fig. 8.19); East Jordan Valley region (Ibrahim *et al.* [1976], fig. 24); Gazit region (Gal [1991], site 57, fig. 1.5); Ḥayfā, St. Mary of Carmel (Pringle [1984a], fig. 8.69, 70); Ḥammāt Gader [Boas [1997], pl. IV.9, 10]; Jarash (Tholbecq [2000], fig. 80); Malka region (Walker [2005], fig. 21.7–9); Nāšira (Bagatti [1971] fig. 19.5–7; [1984], fig. 65.6, 9, 11–12); Ramla (Kaplan [1959], fig. 3B. 14, 15); Southern Ghawr (MacDonald [1992], pl. 30.c); Tabaqat Faḥl (Walmsley [2000], fig. 10.3); Tabgha (Loffreda [1982], p. 420, fig. 9.2); Tal Abū Qaʿdān (Franken and Kalbeck [1975], fig. 38.23, 27, 28); Tal al-Mutasallim (Schumacher, 1908: figs. 269–71); Tripoli (Salamé-Sarkis [1980], pl. LII.2.1, 2); Umm Qays (Brown in Miller [1991], p. 236); and Wādī ʿArab region (Hanbury-Tenison [1984], fig. 19.34); and Zirʿīn (Grey [1994], fig. 9.4). Possible examples have been located in thirteenth-century deposits at: ‘Akka (Pringle [1997], no. 52, p. 143); Belmont castle (Knowles in Harper and Pringle [2001], pp. 112–13, fig. 7.7.104); Jerusalem, Armenian Garden, ‘Ayyubid’ phase (Tushingham [1985] p. 143); and Wuʿayra (Vannini *et al.* [1995], p. 535).

⁶⁴ It has been suggested by Brown that Umm Qays may be a production centre for this style of sgraffito, although this suggestion remains to be verified. See Brown in Miller (1991), p. 236.

⁶⁵ Vannini and Vanni Desideri (1995), p. 535.

⁶⁶ Wide incised sgraffito is reported from a thirteenth-century context at Dhibān (Tushingham [1972], pp. 83–84) and phase III (thirteenth and fourteenth century) at Beirut (el-Masri [2000], p. 109). The finds from St Carmel at Ḥayfā probably date to the thirteenth century (i.e. during the Crusader occupation) although the presence of ‘blue and white’ stoneware shards indicates that there was a further occupation phase sometime in the later fourteenth century. See Pringle (1984).

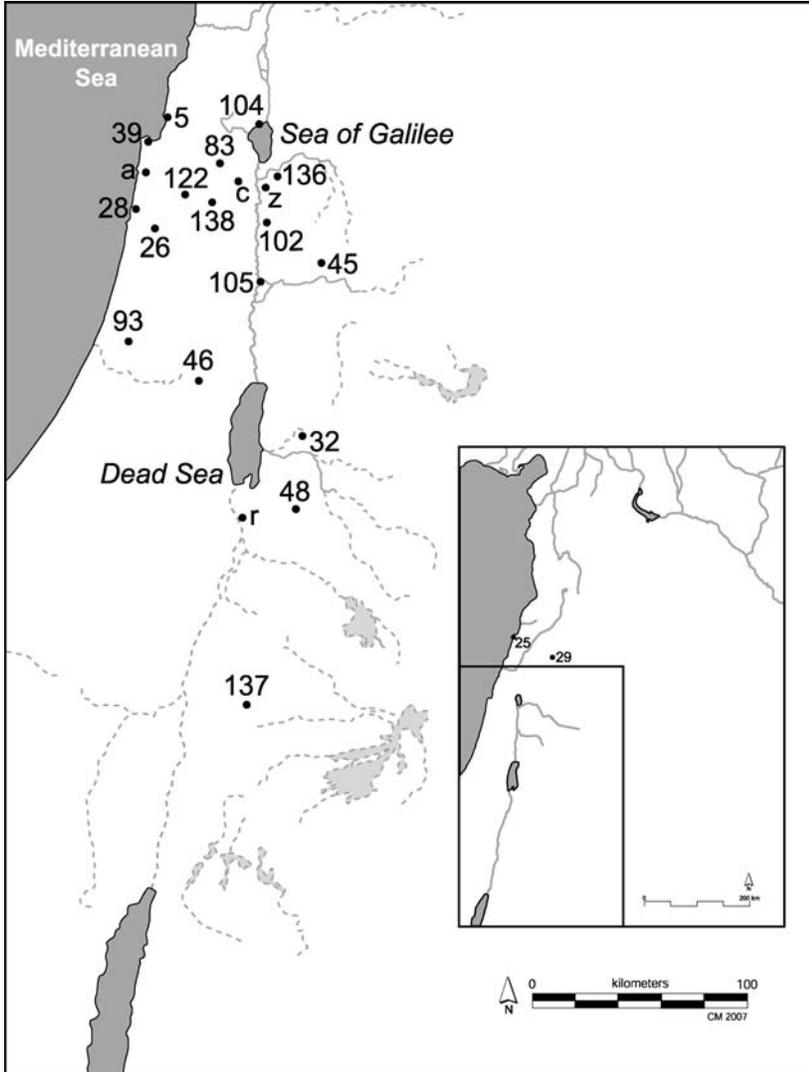


Figure 16. Distribution in Bilād al-Shām of widely-incised sgraffito.

derives from Aegean pottery of the twelfth and thirteenth century that was imported into Cyprus and the coast of Palestine.⁶⁷

The small group of narrow incised sgraffito in the Karak assemblages is both technically and stylistically heterogenous. These pieces were clearly produced at different times and in different production centres. A couple of interesting examples can be highlighted here. A.4071 and A.4072 [22.3] were from the same green-glazed flange rim bowl. The presence of drill holes along the broken edges indicate that they were, at some point, repaired with wire. The finely incised and energetic curvilinear design, and the use of monochrome green lead glaze are unusual in the Karak assemblages. The available parallels perhaps suggest that this was a product of one of the Crusader pottery centres in Palestine,⁶⁸ though an intriguing parallel can also be drawn with a fourteenth-century find at Padua.⁶⁹ F.7672 [23.4] is the shoulder of a small glazed container constructed of a brick-red, granular ceramic fabric. The exterior has slip-incised decoration under an ochre coloured glaze. Closed vessel shapes are very rare in lead-glazed sgraffito wares of the Middle Islamic period,⁷⁰ and none of the published examples bears any obvious similarity to the Karak shard.

Three shards (A.4083 [23.4], F.7670 [22.12] and F.7671 [23.2]) were identified as imports from Italy.⁷¹ They are characterised by the hard, pinkish ceramic fabrics and the thick, cream coloured slip. The glazes are thin, but glassy, and with few impurities. The incised decoration is drawn with a fine point and a roulette, and may consist of geometric, vegetal, zoomorphic and human designs. The absence of scars in the glaze indicates that these sgraffito bowls were twice fired using saggers in the second firing rather than kiln tripods. The export of Italian incised glazed wares into the Middle East is a phenomenon which starts in the second half of the fifteenth century and continues in the sixteenth and

⁶⁷ For the possible relationship between Aegean 'Paphos ware' and wide incised sgraffito, see Milwright (2003), pp. 90–91.

⁶⁸ Cf. Caesarea (Pringle [1985], figs. 8, 11); Jerusalem, Damascus Gate (Wightman [1989], pl. 42.14); and Khirbat al-ʿAyadiyya (Ben-Tor [1966], fig. 12.4). Monochrome green sgraffito is also noted at: Burj al-Aḥmar (Pringle [1986], fig. 50.71); and Mīnā (Lane [1938], p. 64).

⁶⁹ Cozza (1987), p. 124, fig. 26.a.

⁷⁰ Examples include: Fuṣṭāṭ (Bahgat and Massoul [1930], pls. LII.3, LIV.4; ʿAbd al-Rāziq [1988], fig. 5); Mīnā (Lane [1938], fig. 8.1); and Quṣayr Qadīm (Whitcomb and Johnson [1982], pl. 35.h).

⁷¹ Another possibly Italian shard is F.7668. Cf. a piece from Padua published in Cozza (1987), p. 118, fig. 20.t.

seventeenth centuries.⁷² In addition to Italian sgraffito, excavations in the Middle East have reported examples of maiolica and slip marbled ware. The majority of the Italian imports published from excavations and other studies are found in Jerusalem, but there is evidence of a wider distribution of these wares in the Levant (fig. 21).⁷³ It has been suggested that these attractive objects may have been carried to the Middle East as part of the personal effects of European merchants, but the presence of examples in more remote locations such as Karak and the Ḥawrān may indicate some limited degree of commercial distribution. The detailed publication of sgraffito wares from Italian excavations and museum collections means that it is possible to fix the probable chronological boundaries and suggest the possible regions of manufacture for the imported examples from Karak. The decoration of A.4083 [23.4] and F.7670 [22.12] exhibit close similarities to north Italian sgraffito wares of the period *c.* 1470–1530,⁷⁴ while a virtually identical design to F.7671 [23.2] is found on a late fifteenth-century bowl from Venice.⁷⁵

Relief-moulded glazed wares (Catalogue Pages 23–25, pp. 310–318 & 370–372)

Relief-moulded glazed wares constitute *c.* 1.5% of the total assemblage and *c.* 6% of the lead-glazed pottery.⁷⁶ The examples of relief-moulded glazed ware from Karak all show signs of high levels of craftsmanship in the manufacturing process. The ceramic fabric tends to be highly

⁷² For a general survey of this issue, see Pringle (1984b). Also Meinecke-Berg (1983); Milwright (2000), pp. 196–97, table 1.

⁷³ Examples of fifteenth- and sixteenth-century Italian imports of various types are reported from: 'Akka (Pringle [1984b], p. 40; Antioch (Waagé [1948], fig. 88.25, 26); 'Ayzariyya (Saller [1957], pl. 124); Baysān (Zori [1966], pl. 10.f); Fustāt (Wallis [1891], appendix, pl. V.11); Ḥamā (Riis and Poulsen [1957], nos. 405–408); Ḥawrān (unnamed site) (Meinecke-Berg [1983], pl. 57.a); Jerusalem, Armenian Garden (Tushingham [1985], fig. 45.21); Jerusalem, citadel (Johns [1950], pl. LXIII.3); Jerusalem, Damascus Gate (Wightman [1989], pl. 67.7, 8); Kawm al-Dikka, Alexandria (Kubiak [1969], p. 29); Mīnā (Lane [1938], pl. XXII.1.j); and Tripoli (Salamé-Sarkis [1980], pl. XLVII.9). Another possible find came from Tal al-Şāfiyya (Bliss and Macalister [1902], pl. 65.7).

⁷⁴ Cf. Poole (1995), nos. 554, 558; Ferrari (1990), pl. 1, figs. 84, 85, 101, 111–12, 118, 119, 141; Reggi (1971), pls. 59, 60, 78, 101, 124, 154, 172, 173b, 174; Cozza (1987), fig. 20.s; Magnani (1981–82), I, pl. XXIII.

⁷⁵ Saccardo (1993), pl. 16.4. The pyramidal motif is also seen on other shards from Venice (Saccardo [1993], pl. 16.1–3) and Ferrara (Reggi [1971], pls. 218, 223).

⁷⁶ T = 111; A = 37; B = 2; C = 1; D = 12; F = 59.

levigated, hard and fires pink or pale buff. Three relief-moulded glazed ware shards (A.4127 [23.8], A.4149 [24.15], and A.4150 [24.9]) from Karak were submitted to petrographic analysis. The ‘petrofabrics’ of the first two were found to be very similar in composition, particularly in relation to the types of quartz and the presence of nodules of white clay. The third example exhibited technical and stylistic differences and this distinction was also seen in the character of the petrofabric (A.4150 was distinguished from the others by the presence of argillite, carbonate and basalt).⁷⁷ The slip is evenly applied over the interior and exterior, and the glazes are usually thick and glassy. Glaze colours range from yellow-ochre to green and manganese brown/purple. Unlike the sgraffito and plain lead-glazed wares from Karak, flaking of the glaze is uncommon in relief-moulded glazed ware. The presence of scarring on the interiors of some bowls indicates that they were fired in the kiln separated by kiln tripods. The relief-moulded decoration is confined to the exterior of the bowls, though in some cases simple designs might be incised through the slip of the interior. Two shards in the Karak assemblage came from closed vessels (A.4150 [24.9], F.6965 [24.8]), with the remainder of the group from footed bowls. Bowls are divided into those with a curved body and those with a distinct carination in the lower part of the body. In many cases, the rims of these bowls were turned inward. This rim shape probably helped facilitate the removal of the bowl from the decorative mould.⁷⁸ All of the bowls seem to have been supported on a high pedestal base. F.6965 [24.8] was the only example where the decoration had been applied with decorative stamps and by hand rather than with the use of a mould. This piece was also distinguished from the remainder of the group by the coarser quality of the ceramic fabric and the lead glaze.⁷⁹

The decoration on the exteriors of the relief-moulded bowls is arranged in a variety of ways. The first, and least common group (A.4129 [23.16], A.4130 [24.7], A.4149 [24.15] and D.5372 [24.26]) comprises repeated schematic representations of date palms or other trees.⁸⁰ These bowls are distinguished from the remainder of the group

⁷⁷ Mason and Milwright (1998), p. 184 (petrofabrics ‘Karak 14’-‘Karak 16’).

⁷⁸ For a summary of the process of manufacturing mould cast vessels, see Franken and Kalsbeek (1975), p. 40, fig. 5.

⁷⁹ This ware is discussed in more detail in Milwright (2003).

⁸⁰ Examples of relief-moulded glazed ware with this type of decoration appear at: ‘Ayzariyya (Saller [195], fig. 59.3423); Ḥasbān (Sauer [1973], fig. 138); Jerusalem, Armenian Garden (Tushingam [1985], fig. 41.31); and Sabastīyya (Crowfoot *et al.* [1932], fig. 84a.10).

by the pale, very finely levigated ceramic fabric and the dark manganese glaze.⁸¹ The larger group is broadly consistent in terms of the ceramic fabric and is typically glazed with green or ochre glazes (sometimes combined on a single vessel). In some examples (e.g. A.4126 [23.15]) the whole of the exterior is ornamented with a simple arcade pattern. In the remainder, the space on the exterior of the bowl is subdivided by concentric lines into a central frieze with narrow framing bands. A range of geometric and vegetal repeat patterns is employed in these bands and friezes. It has been claimed that relief-moulded glazed ware bowls are sometimes decorated with zoomorphic designs,⁸² but no examples have yet been published. In the absence of reliable photographic evidence it seems reasonable to assume that the presence of human or animal designs was extremely rare on relief-moulded glazed ware.

The most important mode of decoration in the friezes comprises inscriptions written in a bold cursive script. The inscriptions do not always appear to be legible, and it is possible that the craftsmen responsible for cutting the moulds were copying inscriptions on contemporary metalwork produced in the urban centres of Palestine and Syria.⁸³ The frequent mistakes found in the published examples suggests that the carvers were not always fully literate. While the inscriptions on the shards from the Karak assemblages are too fragmentary to permit a reading, more complete examples have been recovered elsewhere. Typically, these inscriptions contain generic messages of goodwill. A good example is a complete bowl from Ḥamā that reads, *al-ʿizz waʿl-ʿiqbāl waʿl-majd waʿl-afdāl wa lihiʿl-saʿadat al-kāmilat al-dāʿim* ('power and prosperity and glory and excellence and to him perfect and eternal good fortune').⁸⁴ None of the published pieces carries the name of a craftsman or patron, though one of the bowls from Karak (A.4132 [23.6]) carries the word *ʿamala/ʿumila* which may well have been followed by the name of the craftsman or the patron.⁸⁵ Recent excavations

⁸¹ One example of this group (A.4149) was submitted to petrographic analysis. Though visually different from petrofabric 'Karak 14', it was found to be closely related in mineral composition. See Mason and Milwright (1998), p. 184 ('Karak 15').

⁸² Saller (1957), p. 280.

⁸³ See discussion in Milwright (2003), pp. 97–103.

⁸⁴ Riis and Poulsen (1957), fig. 398 (the reading is given by Hammershaimb on p. 290 of the same publication). For other similar inscriptions, see Milwright (2003), p. 95; Milwright (2004b).

⁸⁵ On the 'signatures' of craftsmen on Mamluk sgraffito, see 'Abd al-Raziq (1967); Walker (2004), pp. 42–54.

in Ḥasbān have recovered several partial relief-moulded glazed ware bowls, two of which apparently carry the phrases, ‘Glory, good fortune and achievement to the amir’ and ‘made [on the order of] the amir...’ (*mimmā ‘umīla bi rasm al-amīr*) respectively.⁸⁶ The latter formula is commonly associated with Mamluk metalwork produced in the late thirteenth and fourteenth centuries.

In a few cases, the inscription friezes are broken at regular intervals by roundels containing simplified versions of the blazons employed by the Mamluk military class. The eight-petalled rosette on A.4125 [23.7] is unusual in Mamluk blazonry (rosettes usually have six petals), but one example, the blazon of Mūsā b. Yaḡhmūr al-Yārūqī (d.1264–65), is known.⁸⁷ That said, the late thirteenth- to fourteenth-century dating usually assigned to relief-moulded glazed ware (see below) would make unlikely an association with this amir. Given the ubiquity of blazons on Cairene sgraffito and unglazed relief-moulded canteens, there is no reason to assume that the presence of blazons on relief-moulded glazed ware bowls indicates that they were made as part of commissions by Mamluk amirs. It seems more likely that the inclusion of these motifs, like the inscriptions which imitate the form of those on inlaid and *repoussé* metalwork, were intended to provide a feeling of luxury and status to otherwise relatively cheap glazed earthenwares.

Middle Islamic relief-moulded glazed ware corresponding to the Karak examples is found on the Karak plateau,⁸⁸ and elsewhere in Bilād al-Shām (fig. 17).⁸⁹ Relief-moulded glazed ware was distributed

⁸⁶ Walker and LaBianca (2003), p. 465, figs. 33.2, 3; Walker (2003), pp. 256–57, fig.4. Both the use of the word ‘amir’ and the phrase ‘made on the order of’ are unknown in the remainder of the published relief-moulded glazed ware shards. I was unable to verify the presence of the word ‘amir’ on the drawings or photographs in the two publications.

⁸⁷ Mayer (1933), p. 171, pl. XXXIV.2.

⁸⁸ Khirbat Fāris (Johns *et al.* [1989], fig. 27.59); Karak plateau survey (Miller [1991], nos. 452–57. Also survey sites: 35, 38, 66, 71, 108, 166, 211, 214, 215, 233, 270, 273, 274, 278, 304, 420, 427).

⁸⁹ Examples of relief-moulded glazed ware are reported from: ‘Afūla (Dothan [1955], fig. 8.16); ‘Ayn Kārim (Saller, [1946], pl. 35); ‘Ayn Shams (Grant and Wright [1938], pl. L.26); ‘Ayzariyya (Saller [1957], p. 280, nos. 11–17); Baysān (Zori [1966], pl. 10E); Burj al-Aḡmar survey region (Pringle [1986], sites 28, 32); Damascus citadel (Syrian Directorate of Antiquities, unpublished); Dāmiya (Milwright 2004b); Ḥamā (Riis and Poulsen [1957], no. 398); Ḥasbān, ‘Early Mamluk’ phase (Sauer [1973], fig.4.138–40; LaBianca and Walker [2001], fig. on p. 9); Jerusalem, Armenian Garden, ‘Mamluk’ (Tushingham [1985], figs. 39.12; 41.31, 36, 41; 44.13, 15); Jerusalem, Church of the Ascension (Corbo [1965], fig. 12.17); Jerusalem, Damascus Gate (Wightman [1989], pls. 64.9–13; 65.1, 2; 220–22); Khalīl (Bennett [1972], chapter IV); Khirbat Birzayt (Abd Rabu [2000], pp. 10–11, fig. 6); Ma‘anit region (Ne‘eman [1990], site 55, fig. 1.9); Naḡal

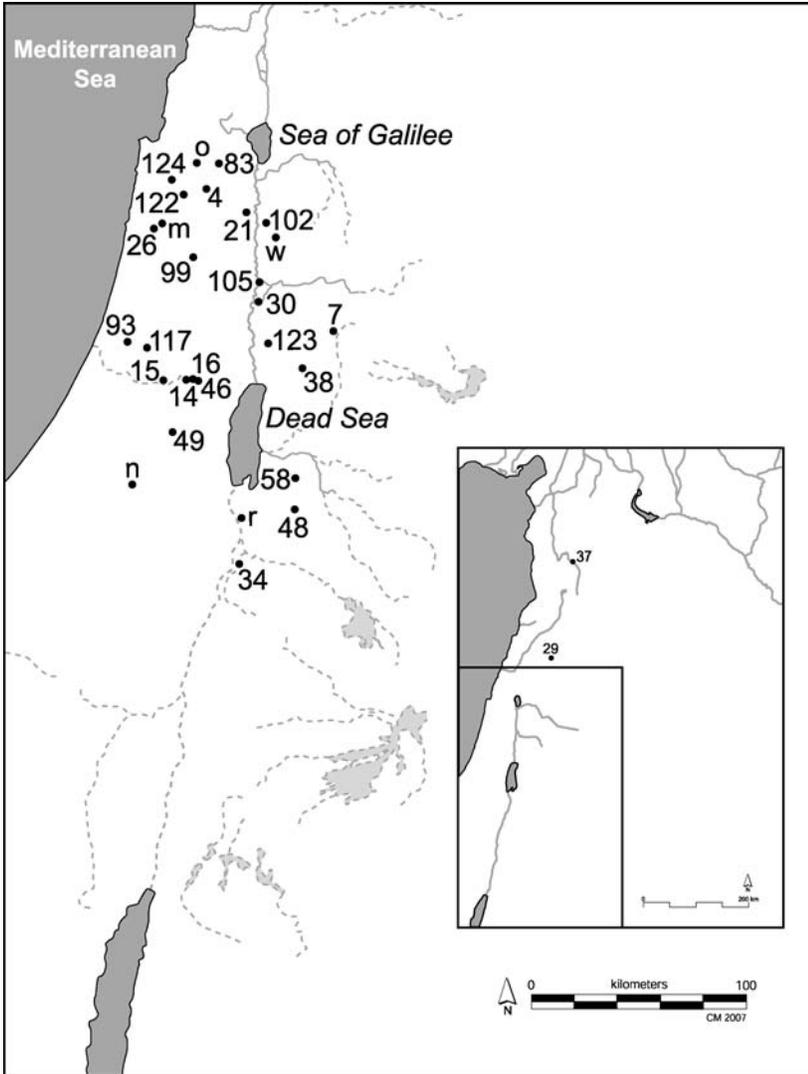


Figure 17. Distribution in Bilād al-Shām of relief-moulded lead-glazed ware.

over a relatively wide area stretching from Ḥamā in the north to the Mediterranean coast of the Sinai in the south, but the most significant clustering of finds comes from the inland towns and villages of Palestine and Jordan. The degree of penetration into inland Syria or the coastal strip appears to have been more minor. The number of relief-moulded glazed ware shards is not large on any site, but the concentration of reported finds in and around Jerusalem perhaps indicates that this was one of the major production centres for this lead-glazed ware.⁹⁰ The presence of blazons on some of the published relief-moulded glazed ware points to a date in the Mamluk period. All of the published blazons on relief-moulded glazed ware bowls are composed of single designs within roundels (in contrast to the greater variety found on the sgraffito bowls produced in Cairo and Alexandria, the so called 'barracks ware'). While this fact would suggest that relief-moulded glazed ware was produced in the early Mamluk period before the advent of blazons with split fields and two or more motifs (features generally associated with the third rule of al-Nāṣir Muḥammad ibn Qalāwūn, 1310–41), the archaeological evidence suggests the production of this ware through to at least the third quarter of the fourteenth century (see below). This would suggest that the blazons on these bowls were added as a decorative feature, and were not part of specific amiral commissions.

The archaeological record in Bilād al-Shām provides some dating evidence that may be briefly summarised. At Ḥasbān relief-moulded glazed ware appears in contexts dated to the early Mamluk period (*c.* 1260–1400), and at the Armenian Garden in Jerusalem this ware was recovered from a context dated by coin evidence to the rule of sultan

Yattir region (Govrin [1991], sites 63 and 68); Nāṣira (Bagatti [1984], fig. 68, pl. 78); Northern Sinai (Cytryn-Silverman [1996], p. 125; Ramla (Cytryn-Silverman [forthcoming], no. 82.105.6.100); Sabastīyya (Crowfoot *et al.* [1957], fig. 84a.10); Southern Ghawr, Tawāḥim al-Sukkar and Fayfā' (King *et al.* [1987], sites 7, 17); Tabaqat Fahl (Smith [1973], pls. 93–94); Tal Abū Qa'dān (Franken and Kalsbeek [1975], fig. 38.31–33); Tal al-Mutasallim (Schumacher [1908], figs. 269–71); Tal Nimrīn (Dornemann [1990], pl. II.2.12–14; Flanagan *et al.* [1994], fig. 17.3); Tal Qaymūn (Ben-Tor *et al.* [1996], p.102, fig. XIII.43); Wādī al-Yābis region (Mabry and Palumbo [1988], fig. 14.94); and Zirīn (Grey [1994], p. 59). Other possible examples are reported from: 'Ammān (Hadidi in Thompson [1989], fig. 4); Belmont castle (Knowles in Harper and Pringle [2001], pp. 103–105); Mādabā plains (Herr [1991], fig. 12.120.12); Nahalal region (Raban [1982], p. 30, fig. A.10); and Tal Jazar (Macalister [1912], pl. CLXXXIX.14).

⁹⁰ Relief-moulded glazed ware shards were apparently found near a kiln discovered in the Jewish quarter of the Old City in Jerusalem. See Avissar in Ben-Tor *et al.* (1996), p. 102.

Shaʿbān II (r. 1363–76).⁹¹ The near complete bowl found at Ḥamā probably dates to before the destruction of the citadel in *c.* 1401 (it is worth noting, however, that the excavated ceramics do show that occupation continued on the site into the Ottoman period).⁹² It is possible that relief-moulded glazed ware was being made in the latter part of the thirteenth century, but it is likely that most examples can be dated to the fourteenth. The published excavations in the region do not indicate whether this ware continued into the fifteenth century.⁹³

Section 2: Alkaline-glazed Wares (Catalogue Pages 25–36, pp. 315–340 & 372–383)

Alkaline-glazed pottery constitutes *c.* 11% of the total assemblage and *c.* 32% of the glazed wares.⁹⁴ The term ‘alkaline-glazed’ is used here for the sake of convenience, though it should be recognised that the chemical composition of the glazes in this group of wares may vary considerably. The one defining characteristic is taken to be the use of significant quantities of soda or potash in the glaze. These alkaline compounds act as a flux to lower the melting point of the glaze to *c.* 900–1000°C.⁹⁵ Typically, the composition of an alkaline glaze on Syrian stoneware wares (also known as fritware or, less correctly, faience) from the twelfth century onwards is 13–22%Na₂O, 1–3%K₂O, and occasionally 5–10%CaO. A smaller group of glazed stonewares employ a lead-alkali glaze (typically 12–24%PbO and 12–17%Na₂O).⁹⁶ This second type of lead-alkali glaze is mainly associated with the decorated ceramics of central and northern Syria in the twelfth and early thirteenth centuries, while the second type enjoyed more common use in the second half of the thirteenth century and later.

Alkaline glazes may contain traces of lead compounds, but they can be distinguished visually from the high lead glazes (dealt with in section 1

⁹¹ Sauer (1973), fig. 4.138–40; Tushingham (1985), pp. 141–42, 148.

⁹² For a brief survey of the late Mamluk and Ottoman material from the site, see Milwright (2000), pp. 192, 203.

⁹³ A more detailed analysis of the dating and distribution of relief-moulded glazed ware is given in Milwright (2003), pp. 92–93.

⁹⁴ T = 876: A = 381, B = 7, C = 4, D = 34, F = 450.

⁹⁵ Watson (1985), pp. 33–34; Caiger-Smith (1985), pp. 57, 73–75, 199.

⁹⁶ For a discussion of glaze compositions, see Mason (1994), pp. 217–19, table 6.4; Tonghini (1998), p. 46, appendix D: table 2.

of this chapter) by the thickness of the glaze, often pooling in the centre of the vessel or leaving drips of glaze on the exteriors of vessels. The smaller group of lead-alkali glazes have somewhat thinner glazes but, again, they are quite distinct from high lead glazes. Without the addition of mineral colourants minerals, alkaline and lead-alkali glazes are colourless (sometimes with a slightly greenish tinge) with the level of transparency dependent upon the degree to which tiny bubbles of gas remain within the glaze after firing. Minerals can be added to the glaze to create colours: cobalt compounds for a blue; manganese oxide for purple; and copper compounds for green and turquoise. Opaque glazes can be achieved by the addition of agents such as tin oxide and calcium antimoniate, though this is not a common feature in the glazed wares in the Karak assemblages.⁹⁷ Crazing of the glaze is often encountered and is particularly pronounced over earthenware bodies. Alkaline glazes are also vulnerable to corrosion through contact with organic acids in the soil.⁹⁸ Corrosion takes the form of surface iridescence and, in extreme cases, the total decay of the glaze. These types of corrosion are less common on the high lead glazes found at Karak.

The alkaline-glazed pottery from Karak may be separated into two basic categories according to the type of ceramic paste employed in the manufacture. The smaller group is made with pale earthenware fabrics and the remainder is made with stonepaste. There is considerable variation in the first group, but many of the earthenware fabrics appear to have had substantial amounts of finely ground sand added to them, perhaps as a way to encourage the alkaline/lead-alkali glazes to adhere better to the body.⁹⁹ On the other hand, stonepaste is formed from a mixture of pale clay, ground silica (in the form of fine sand or quartz) and ground glass.¹⁰⁰ The precise composition of the paste probably varied from area to area and from period to period. Stonepaste is usually granular in consistency and rather brittle. Although stonepaste has been used to create extremely fine and delicate vessels, most nota-

⁹⁷ Allan *et al.* (1973), pp. 166–68; Mason and Tite (1997); Rogers (1980), p. 277.

⁹⁸ Rogers (1980), pp. 276–78.

⁹⁹ It has been suggested that the true stonepaste body came about as part of an evolutionary process in which potters in Iraq and, later Egypt added increasing amounts of ground quartz and ground glass to a ceramic body. See Mason and Tite (1994).

¹⁰⁰ Allan (1973), pp. 113–14; Caiger-Smith (1985), p. 199; Mason and Tite (1994 and 1997); Henderson (2000), p. 181. Modern studies of stonepaste fabrics have concluded that glass frit was very seldom employed in place of ground glass.

bly the ‘Saljuq’ monochrome glazed wares,¹⁰¹ Middle Islamic Syrian and Egyptian stonepaste vessels are often characterised by thick and sometimes rather clumsy potting. Modern experiments have shown that stonepaste is more difficult to throw than conventional earthenware clays,¹⁰² and it is possible that many of the stonepaste vessels surveyed below were formed in moulds rather than on a kickwheel.

The understanding of the evolution of stonepaste production in Syria has improved as the result of recent archaeological and scientific research. Robert Mason has sought to establish a chronology for lustre-painted and related stonepaste wares in twelfth- and thirteenth-century Syria by combining evidence from petrographic research and excavated material. Importantly, he also proposes revisions to dated contexts such as the ‘Ayyubid’ phase at the Armenian Garden in Jerusalem.¹⁰³ Cristina Tonghini’s excavations at Qal‘at Ja‘bar on the Euphrates have led her to propose a series of distinctions in Syrian stonepaste wares from the eleventh to fourteenth century.¹⁰⁴ Though only a small proportion is yet available for scholarly examination, it is likely that the final publication of the stonepaste wares from Zengid, Ayyubid and Mamluk occupation contexts in the Damascus citadel will fill a major gap in our knowledge of glazed ceramic production and consumption in central Syria from the twelfth to the fifteenth century.¹⁰⁵ Other glazed ceramics of Ayyubid-Zengid date have been recovered from the recent excavations in the Aleppo citadel.¹⁰⁶ Some general comments on the chronology of Syrian stonepaste wares are presented below, with particular reference to the work of Mason and Tonghini. Both scholars present a series of categories based on stylistic and technical features, though they come to different conclusions concerning the developments from the late eleventh to the early thirteenth century. As not all of this information is relevant to an understanding of the glazed stonepaste wares of Karak, I have highlighted a few selected issues in the following paragraphs.

¹⁰¹ Lane (1947), pp. 21–36; Soustiel and Allan (1995).

¹⁰² Brewer reported in Allan *et al.* (1973), p. 169.

¹⁰³ Mason (1997). For the revision of the chronology of the Armenian Garden, see p. 185.

¹⁰⁴ Tonghini (1998), pp. 38–55.

¹⁰⁵ The Islamic ceramics from the Damascus citadel will appear in future publications by Stephen McPhillips and Véronique François. I am very grateful to them, and to Sophie Berthier, for permitting me to see material from the excavations during a visit in 2005. For a short report on the ceramics of the twelfth and thirteenth centuries, see McPhillips (2002) and on the Ottoman period, see François (2002).

¹⁰⁶ Gonnella (2000); (2006), p. 174.

The earliest examples of stonepaste pottery in Syria are the ‘Tal Minis’ group, which take their name from the site near Ma‘arrat al-Nu‘mān where they are believed to have been found, and some other types such as the so-called ‘Laqabi’ wares. Dating to the last quarter of the eleventh century, these lustre-painted ‘Tal Minis’ vessels share stylistic and technical characteristics with broadly contemporary Egyptian glazed and lustre-painted stonepaste wares. Mason suggests that in the early years of the twelfth century Syrian potters shifted from lead-alkali to the use of alkaline glazes and that this remained the dominant technology in the later glazed stonepaste wares manufactured in Syria.¹⁰⁷ The first appearance of under-glaze painting—the most important decorative technique in the stonepaste wares at Karak—is placed around 1125. Among the earliest examples of underglaze-painted wares are those with polychromatic painting employing black, turquoise, blue and red-brown pigments under a colourless glaze (manufactured both in Damascus and in northern Syria). This mode of decoration evolves through the course of the twelfth century, but does not appear to continue into the thirteenth. After *c.* 1150 there is evidence for the production of other forms of underglaze painting in Syria, most notably the use of chromium black under a turquoise (and, less frequently, a colourless or green) glaze. These styles continue into the thirteenth century. Lustre production is noted in Raqqa through to *c.* 1250, and there is also some manufacture of lustre (usually over a dark cobalt glaze) in Damascus, probably between *c.* 1200–1250. In this early phase of glazed stonepaste wares, the major workshops are those of ‘Tal Minis’, Raqqa and Damascus. Other production centres of stonepaste wares of this period have been located along the Euphrates, although the published evidence is still too fragmentary to build up a particularly coherent picture of the glazed ceramic industries in this region before the destruction of the Mongol invasion northern Syria in 1258/59.¹⁰⁸

While Mason’s chronology finishes in *c.* 1250, Tonghini provides a framework for later developments. Her analysis suggests that the

¹⁰⁷ Mason (2004), pp. 101–103, 108–109. Presenting an updated version of the analysis in Mason (1997). Correlations can be made between Mason’s group 1 and Tonghini’s ‘fritware 1’ and ‘intermediate fritware’ groups. See Tonghini (1998), p. 42. For a detailed presentation of the ‘Tal Minis’ wares, see Porter and Watson (1997).

¹⁰⁸ Kilns or wasters of stonepaste wares are reported from: Bālis (Golvin [1980], p. 394); Qal‘at Ja‘bar (Tonghini [1989], p. 46); Samsat (Redford [1995], pp. 65–66). See also petrographic characterisations for Syrian stonepaste wares in Mason (2004), pp. 103–108.

Syrian stonepaste fabrics from the mid thirteenth century onwards (her 'fritware 3' group) may be distinguished from the earlier groups by the soft, friable, porous and with a gritty texture. Analysis on shards from Qal'at Ja'bar found a smaller proportion of clay minerals in the fabric in relation to the quantities reported in the earlier 'fritware' groups.¹⁰⁹ The glazes of this last group also seem to be more prone to decay leading to pronounced crackling and iridescence. The vast majority of the glazed stonepaste wares from Karak may be fitted into this general group. Abundant evidence is available for the manufacture of 'fritware 3' in Damascus and Fustāt,¹¹⁰ but it is possible that other workshops existed in Syria, and even Palestine during the later thirteenth and fourteenth centuries.

The principal method used for differentiating ceramic fabrics within the Karak corpus was visual analysis employing a X10 magnification eye glass. For earthenware bodies, this method is adequate for making broad distinctions in the assemblage, but the same approach is not suitable for stonepastes. The stonepaste fabrics tend to appear as a uniform granular consistency with only minimal colour variations. Neutron activation analysis¹¹¹ and petrographic analysis¹¹² have been employed to differentiate stonepaste fabrics, and this work is helping to refine our understanding of the manufacture of these fine ceramic wares in Syria, and elsewhere in the Islamic world. A small group of shards from the Karak assemblage was submitted to petrographic testing,¹¹³ but other methods had to be used in the classification of the remaining stonepaste material. Some general distinctions were identified. The earliest stonepaste wares at Karak (those of mid twelfth through to the early thirteenth century) appear to be made of more compact, harder fabrics that sometimes have a very pale grey colour. Later stonepaste wares at Karak (probably almost exclusively from Damascus) tend to have a sugary consistency and are whiter in colour. As long ago as 1924, archaeologists noted the apparent difference between the greyish stonepaste of Egyptian wares to the off-white, softer fabric of many

¹⁰⁹ Tonghini (1998), pp. 51.

¹¹⁰ Tonghini (1998), pp. 52–53.

¹¹¹ Rice (1987), pp. 369–98; Jenkins (1984).

¹¹² For instance, Mason and Keall (1990); Mason and Golombek (1990); Mason (1995a).

¹¹³ Mason and Milwright (1998).

Syrian/Damascene wares.¹¹⁴ The validity of this general observation has subsequently been tested by petrographic analysis.¹¹⁵

The classification system used for the discussion of the Karak alkaline-glazed group is based principally upon observable characteristics of the glaze and decoration. This section is split into discussions of: 1) monochrome alkaline-glazed; 2) black painted under a transparent colourless glaze; 3) black painted under a transparent turquoise glaze; 4) polychrome painted under a transparent alkaline glaze; 5) turquoise and black under a transparent alkaline glaze; 6) blue and black painted under a transparent alkaline glaze; 7) blue painted under a transparent alkaline glaze; 8) lustre painted over a transparent blue glaze. Categories 1 and 2 include examples of glazed earthenwares, but the remainder are exclusively glazed stoneware wares.

Monochrome alkaline-glazed wares (Catalogue Pages 25–26, pp. 315–321 & 372–373)

Monochrome alkaline-glazed wares are relatively common in the Karak assemblages, constituting *c.* 3% of the total assemblage and *c.* 30% of the alkaline-glazed pottery.¹¹⁶ This is a technically and stylistically diverse group containing both earthenware and stonewares and a variety of glaze colours. Though some variation was noted in the earthenware fabrics, most are medium-soft and brittle with a granular texture, perhaps caused by the addition of large quantities of fine sand (presumably added to the fabric to help the glaze to bond to the body). Wheelthrowing is the principal method of construction with moulding and hand shaping also occasionally encountered. Both transparent and opaque glazes are employed.

The majority of the shards are from open bowls supported on ring feet. Bowl rim can be divided into a three categories, shallow bowls flange rims, deep bowls with straight rims, and deep bowls with an everted rim. Ring feet are either flared out or turned inward. The flange rim bowls all have a large diameter (330–410 mm) and, with the exception of the stoneware vessel A.4164 [25.11], are constructed of earthenware fabrics. A.4162 [25.12] and A.4164 [25.11] have trans-

¹¹⁴ For instance, Raphael (1923–24), p. 20.

¹¹⁵ Mason and Golombek (1990), pp. 473–74; Mason and Keall (1990), pp. 181–82.

¹¹⁶ Total = 260: A = 58, B = 3, C = 1, D = 13, F = 185.

parent green glazes but the remainder of the group are covered on the interior and exterior with a thick, opaque green glaze. Additional decorative features include scalloped rims, 'pie-crust' rims, and shallow fluting moulded on the cavetto. The deep bowls with straight rims are constructed in both earthenware and stoneware and display a wide range of glazes (both in terms of colour and degree of opacification). Shallow incised decoration has been employed under the glaze on A.4175 [25.10] and A.4180 [25.8]. The last group of bowls includes both earthenware and stoneware types. The profile of A.4168 [25.7], a bowl with a colourless alkaline glaze, is paralleled by underglaze-painted stoneware wares such as A.4223 [26.7] and D.5234 [26.28]. Closed vessels are less common and take the form of beakers (e.g. A.4167 [25.14]), bag-shaped jars (e.g. A.4216 [25.16]), or tall jars with a carination near the base (e.g. A.4196 [25.19]). A.4196 is made from a hard buff fabric covered with a semi-opaque white glaze. The closest comparison for this shard is the black and white shard A.4221 [26.11].

The pervasive aesthetic influence of Chinese celadon is apparent in the monochrome alkaline-glazed wares from Karak. Both the forms and the glazes employed on the bowls from the Karak assemblage were intended to imitate characteristics of Sung celadon wares. Parallels for the rim shapes of A.4162 [25.12], F.7908 [25.15] and A.4164 [25.11] exist among the celadon wares recovered from Fustāt and Antioch.¹¹⁷ Equally, the employment of incised decoration beneath a transparent glaze (e.g. A.4175 [25.10] and A.4180 [25.8]) is a feature probably derived from *qingbai* ware (see, for instance, A.4526 [36.13] in the Karak assemblage). F.7928 [26.2] takes the imitation of Chinese ceramic forms further with the employment of a drilled hole in the base covered by a ceramic wafer. This feature appears in large celadon bowls to avoid cracking during the biscuit firing, but has no technical justification in Islamic pottery. It was presumably done to make the vessel appear more Chinese in character (this feature is sometimes seen on imitation celadon wares from Fustāt).

The impact of Chinese pottery is evident from excavations elsewhere in the Levant. For instance, George Scanlon's 1968 Fustāt shard count found imitation celadon to be the most common glazed ware of those collected on the site.¹¹⁸ A group of shards corresponds in ceramic

¹¹⁷ Gyllensvard (1975), figs. 18.4; 26.1, 2; 35.3, 4; Waagé (1948), fig. 93.b.

¹¹⁸ Scanlon (1971), p. 225.

fabric and glaze types to opacified alkaline-glaze wares found at Fuṣṭāṭ (e.g. A.4167 [25.14] and F.7919 [25.13]).¹¹⁹ A Syrian provenance is, however, equally likely for the Karak shards. Monochrome alkaline-glazed wares are reported in small numbers on the Karak plateau.¹²⁰ These wares are less commonly found on excavations in Bilād al-Shām than in Egypt, but the finds are evenly dispersed over the region.¹²¹ Monochrome alkaline-glazed wasters are reported in the ‘Bartels gift’ which is said to have come from the vicinity Ma‘arat al-Nu‘mān.¹²² Two monochrome alkaline-glazed shards from Karak, A.4164 [25.11] and A.4178 [25.9], were submitted to petrographic analysis. The fabrics correlated closely with the lustre shard (F.8199 [36.4]). A Damascene provenance was assigned on the basis of comparisons with previous petrographic data.¹²³

Comparisons with other excavated material provide some clues concerning the dating the pieces in the Karak assemblage. Parallels have been identified with celadon found at Fuṣṭāṭ post-dating the 1168 destruction.¹²⁴ Monochrome alkaline-glazed shards are found in strata at Ruṣāfa are dated by the excavators from the Byzantine period through to early thirteenth-century. Stonepaste shards (including wasters) covered with colourless, turquoise, manganese purple, or cobalt blue glazes have recently been unearthed in Raqqa/Rāfiqa. This last phase of the industrial activity in the city can be dated between the second half of the twelfth century and 1259.¹²⁵ The ware is also attested in thirteenth- and fourteenth-century contexts at Burj al-Aḥmar (phases C and D1) Buṣrā (phases III, IV and VII), the Armenian Garden in

¹¹⁹ Both shards have a opaque, pale blue glaze over a brown, biscuit textured body. This can be compared to the description of material found scattered around a kiln in Fuṣṭāṭ. See Bahgat (1914), p. 239; Baroni (1914), p. 99.

¹²⁰ Miller survey, sites 108, 202, 211, 270, 304.

¹²¹ Examples are reported from Ba‘albak (Sarre [1925], fig. 24.39), Beirut (Fouquet [1900], pp. 110–11, n. 2), Burj al-Aḥmar, (Pringle [1986], fig. 51.77; survey sites 3, 4, 5, 10, 28, 32), Buṣra (Berthier [1985], figs. 59, 60), Dhibān (Winnett and Reed [1964], pl. 66.21), Fuṣṭāṭ (Bahgat [1914] p. 239 *et passim*), Ḥamā (Riis and Poulsen [1957], nos. 400–410), Jerusalem, Armenian Garden (Tushingham [1985], figs. 40.12, 13; 41.22), Jerusalem, Damascus Gate (Wightman [1989], pl. 68.12); Qaṣr al-Ḥayr East (Grabar *et al.* [1978], pl. G-3), Quṣayr Qadīm (Whitcomb and Johnson [1979], pls. 38.m; 41.b), Ruṣāfa (Logar [1991], fig. 5.2), Shawbak (Brown [1988], fig. 12.32), Southern Ghawr (King *et al.* [1987], sites 7, 14), and Tripoli (Salamé-Sarkis [1980], pl. LXX.4).

¹²² Porter and Watson (1987), appendix, pp. 192–99 (and esp. pls. 1–4, 9).

¹²³ Mason and Milwright (1998), pp. 185, 187.

¹²⁴ The main types found on the site are illustrated in Gyllensvard (1975).

¹²⁵ Milwright (2005), fig. 9.

Jerusalem, Qaşr al-Ḥayr East (period 2), Quşayr Qadīm, and Shawbak (phase III). No examples of this ware are known from fifteenth-century contexts in Bilād al-Shām. It may be that the popularity of imitation celadon dwindled in the latter part of the fourteenth century as the importation of Chinese blue and white porcelain started in bulk.¹²⁶

Black painted under a transparent alkaline glaze (Catalogue Page 26, pp. 318–321 & 373)

Stonepaste wares with black painting under a transparent glaze ('black and white') constitute *c.* 0.5% of the total assemblage and *c.* 5% of the alkaline-glazed wares.¹²⁷ A.4221 is constructed of a pale earthenware fabric but the remainder of the group are stonepaste wares. The black pigment ranges from greenish grey to dark brown.¹²⁸ In many examples the transparent glaze is glassy with a greenish tinge but in others (A.4223 [26.7], A.4226 [26.8], F.7943 [26.5]) the glaze is thinner with a matt surface. Open vessels in this group take the form of hemispherical bowls with flange rims, carinated bowls with steep, flared sides, and shallow bowls with straight or gently everted rims. A.4221 [26.11] is a low ring foot and may have come from a beaker or narrow vase.

Black and white wares are rare on Middle Islamic sites in the Levant,¹²⁹ although some of the 'silhouette' wares published from Fustāt, Ḥamā, and other sites may also be black and white wares. Black and white wares are heterogenous in ceramic paste, profile, glaze type, and decorative style. A.4221 [26.11] is the only earthenware vessel and can be related to a piece of monochrome alkaline-glazed ware (A.4196 [25.19]), and a shard from a thirteenth-century context at the Armenian Garden in Jerusalem.¹³⁰ Distinct styles can be identified in stonepaste black and white shards. The first style is closely related to the forms and the decorative motifs found black under turquoise

¹²⁶ For a discussion of the introduction of 'blue and white' porcelain into Syria, see Carswell (1979).

¹²⁷ Total = 41; A = 21, F = 20.

¹²⁸ Analysis of the black underglaze pigment used on 'fritware 3' identified it as a chromium spinel (picotite). See Tonghini (1998), p. 51.

¹²⁹ Examples are reported from Alexandria, Kawm al-Dikka (Lane [1949], p.146), Burj al-Aḥmar, phase E (Pringle [1986], fig. 51.81; survey sites 3, 4, 32), Jerusalem, Armenian Garden (Tushingham [1985], fig. 40.6), Quşayr Qadīm (Whitcomb and Johnson [1982] pl. 38.j); Southern Ghawr, Khirbat Shaykh 'Īsā (MacDonald [1992], pl. 32.e–g); and Tūd (Joel [1992], p. 3, section II).

¹³⁰ Tushingham (1985), fig. 40.6.

pottery (see below). These pieces may be assigned a thirteenth-century date. The repeated cross design on A.4222 [26.10] and F.7943 [26.9] is seen on black under turquoise pieces from Karak (A.4282 [26.21]) and Ḥamā,¹³¹ while the zigzag pattern in A.4224 [26.19] is paralleled by F.7963 [26.27]. The second style (e.g. A.4225 [26.6], A.4227 [26.15], A.4238 [26.18]) exhibits links to blue and black underpainted wares and can probably be dated to the late thirteenth or fourteenth century. The small base shard, A.4238 [26.18], is perhaps a crude version of the ‘miniature style’ bowls found at Fustāt.¹³² The flat ring base, A.4240 [26.14] is painted with a large bird (perhaps a pelican) framed in a roundel. Zoomorphic representations are uncommon in the Karak assemblage. Close parallels can be sought in the ‘silhouette’ wares from Ḥamā.¹³³ The technique of incising fine detail into the painted areas can be seen in lustre painting from Fatimid Egypt. Comparable bird designs can be found on lustre shards from Fustāt.¹³⁴ The links identified with Fatimid ceramics and Syrian ‘silhouette’ wares indicate that A.4240 may be amongst the earliest pottery in the Karak assemblage, perhaps dating to the mid twelfth century.

Turquoise alkaline-glazed with black underpainting (Catalogue Pages 26–27, pp. 318–324 & 373–374)

Turquoise alkaline-glazed wares with black underpainting (‘black under turquoise’) comprise *c.* 1% of the total assemblage and *c.* 10% of the alkaline-glazed ceramics.¹³⁵ In most cases, the stonepaste is white with a sugary consistency although smaller numbers of vessels are constructed of a pale grey, harder frit fabric with more frequent impurities. The glaze is usually turquoise in colour although one green glazed shard was reported (A.4255 [27.16]). The majority of the shards come from footed bowls supported on ring feet. There are three types of bowl profile, almost hemispherical footed bowls with flanged rims, footed bowls with steep flared sides and a carination near the base, and curved bowls. The first type is supported on a slightly flared squat ring foot whilst

¹³¹ Riis and Poulsen (1957), fig. 769.

¹³² Lane (1957), p. 19, pl. 16.b.

¹³³ Riis and Poulsen (1957), fig. 688. See also figs. 497–500.

¹³⁴ Bahgat and Massoul (1930), pls. VII.6, X.2, XI.5, XII.10, XXIII.1, XXX.2.

¹³⁵ Total=85: A = 48, B = 1, C = 2, D = 6, F = 30.

the second and third types of bowl have a flat disc base carried on a straight ring foot. The shards from closed vessels (A.4246 [27.9], A.4252 [27.8], A.4282 [26.21]) are all from jars with bulbous bodies and thin necks. Jars vary considerably in scale. A range of motifs and painting styles is employed on the bowls and closed vessels. The relationship between the geometric painting on black under turquoise wares and black and white wares has already been noted in the previous section. Other abstract devices include the repeated dots on A.4255 [27.16] and the design of spiralling lines radiating from the centre of the bowl on A.4254 [27.10]. Such designs are reported from sites in Egypt and northern Syria.¹³⁶ Vegetal designs are common both on open and closed forms. In some cases, the leaves and stems are freely painted over the surface of the vessel (e.g. A.4253 [27.17]),¹³⁷ while in other cases the vegetal motifs are contained within roundels (e.g. A.4274 [4274]).¹³⁸

Black under turquoise shards appear elsewhere on the Karak plateau,¹³⁹ and are widely distributed all over the Levant (fig. 18).¹⁴⁰ Black underpainted stonepaste wares with green rather than turquoise glaze are reported from a smaller number of sites in Bilād al-Shām and Egypt.¹⁴¹ Monochrome turquoise-glazed stonepaste wares have also been

¹³⁶ Repeated dot patterns appear at Tal Barrī (Pecorella [1983], fig. 5) and Ruṣāfa (Lofar [1991], fig. 5.14. Spiral designs appear at Fustāt (Arab Museum [1922], pl. 99) and Ruṣāfa (Logar [1991], fig. 6.16).

¹³⁷ Comparable motifs appear at Quṣayr Qadīm (Whitcomb and Johnson [1979], pl. 51.j, k) and Ruṣāfa (Logar [1991], fig. 6.8).

¹³⁸ A similar arrangement can be seen from bowls excavated at Ḥamā. See Riis and Poulsen (1957), figs. 551, 552.

¹³⁹ Miller survey, sites 108, 211, 427.

¹⁴⁰ Examples are reported from Afāmiyya (Rogers [1972], p. 257), Alexandria, Kawm al-Dikka (Kubiak [1969], pp. 17ff), Ba'albak (Sarre [1925], figs. 38, 56; pl. 24.68a), Burj al-Aḥmar (Pringle [1986], fig. 51.80; survey sites 3, 4, 10, 12, 17, 20, 28, 32), Dakhla Oasis (Keall [1981], fig. 1.14), Damascus, Bāb Sarīja (Toucir [1973], pls. III.a; VII.17), Fustāt (Arab Museum [1922], pl. 99 *et passim*), Ḥamā (Riis and Poulsen [1957], fig. 769 *et passim*), Jerusalem, Damascus Gate (Wightman [1989], pl. 69.3), Jerusalem, Armenian Garden (Tushingham [1985], figs. 41.35, 44.1), Khalīl (Bennett [1972], chapter IV), Mīnā (Lane [1938], p. 59), Qaṣr al-Hayr East (Grabar *et al.* [1978], pl. G-1.18b), Quṣayr Qadīm (Whitcomb and Johnson [1979], pl. 43s); Raqqa (Sauvaget [1948], figs. 10, 11); Ruṣāfa (Legner [1964], pl. 1; Logar [1991], fig. 5), North Shūna (unpublished), Southern Ghawr, Khirbat Shaykh 'Isā and Rujūm (MacDonald [1992], pls. 32.d; 34.d), Tabgha (Loffreda [1982], fig. 10.1), Tal Abū Qa'dān, phase P (Franken and Kalsbeek [1975], fig. 38.12), Tal Barrī (Pecorella [1983], fig. 5), 'Tal Minis' (Porter and Watson [1987], p. 195), Tal al-Mutasallim (Schumacher [1908], fig. 266), Tal Rif'at Region (Bernus-Taylor [1981], p. 482), Tūd (Joel [1992], p. 3, section II), Wu'ayra (Vannini *et al.* [1995], p. 535), and Zir'm (Grey [1994], fig. 10.2).

¹⁴¹ Examples are reported from 'Ammān, Tal Sirān (Hadidi [1989], p. 140),

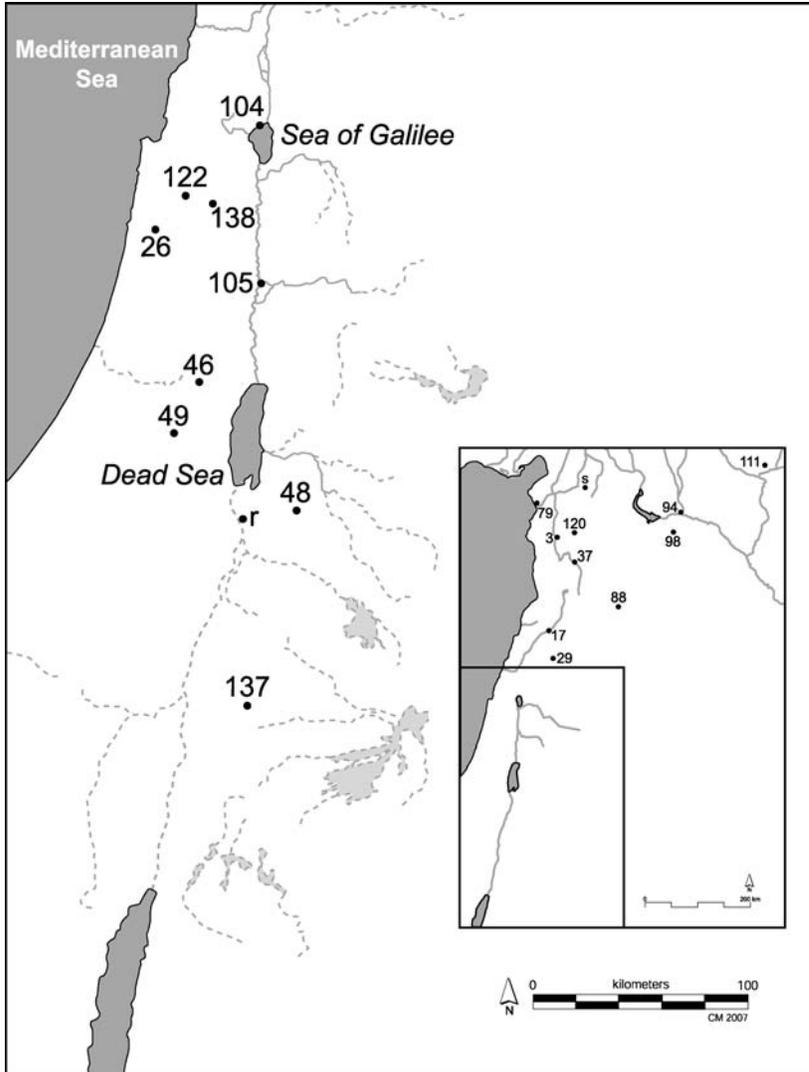


Figure 18. Distribution in Bilād al-Shām of black under turquoise stonepaste.

excavated in Syria and Palestine.¹⁴² A waster of black under turquoise ware was found at Fuṣṭāt,¹⁴³ and other production centres also existed in Syria including Raqqā and Damascus. The ‘Tal Minis’ assemblages contain black under turquoise shards fused with monochrome glazed turquoise and manganese shards. While certainly to be regarded as wasters, the lack of secure provenance means that they are of limited value for establishing the location of a production centre.¹⁴⁴ Wasters of black under turquoise ware were also found during an excavation of the citadel at Konya.¹⁴⁵

The range of vessel profiles, ceramic pastes and painting styles identified in the Karak corpus indicate that black under turquoise wares were produced in a number of manufacturing sites in Bilād al-Shām over an extended period. Mason suggests that the earliest examples of this style of decoration in Syria may be dated to *c.* 1150–1200.¹⁴⁶ Early examples from Karak probably include thin-bodied shards such as A.4255 [27.16], A.4281 [27.10], A.4256 [27.15], F.7963 [26.27] and F.7964 [26.25], as well as the ‘proto-biconical’ profile of A.4274 [27.2].¹⁴⁷ Though some parallels noted in form and decoration may be noted with vessels excavated at sites such as Ruṣāfa, a Damascene provenance seems likely for this early group of black under turquoise wares. The archaeological evidence for the later production of this ware is not abundant, though it seems to be sufficient to allow for much of the Karak material to be placed in the thirteenth and fourteenth

Fuṣṭāt (Scanlon [1971], p. 225; Ashmolean Museum (unpublished); Quṣayr Qadīm (Whitcomb and Johnson [1982], pl. 38.k, q–t), and Tal Ḥrīm, phase III (Berthier and Geyer [1988], p. 93).

¹⁴² Examples are reported from Abū Ghawsh (De Vaux and Steve [1950], p. 146), Antioch (Waagé [1948], p. 88), Buṣrā, phase v (Berthier [1985], pl. 6.66, 67), Raqqā/Rāfiqa (Milwright [2005], figs. 9, 14.6, 7) and Tal Ḥrīm, phase III (Berthier and Geyer [1988], p. 93).

¹⁴³ Mason and Keall (1990), p. 189, no. 909.44.20.

¹⁴⁴ Porter and Watson (1987), p. 195, pls. 3, 4. Given the lack of secure provenance, these pieces may have come from Raqqā/Rāfiqa. See comparisons in Milwright (2005), fig. 9.

¹⁴⁵ Rogers (1972), p. 257, n. 1.

¹⁴⁶ Mason (2004), pp. 98–99. See also examples illustrated in McPhillips (2002).

¹⁴⁷ For the ‘arc-back’ design on F.7964 and the profile of A.4274, see Mason (2004), figs. 5.4 (SS.11), 5.7 (MMA.21). Other examples excavated in late twelfth- or early thirteenth-century contexts include: ʿĀna (Northedge 1988, 103), Caesarea (Pringle 1985, figs. 14.81–83; 15.84–86), Hama (Riis and Poulsen 1957, nos. 503–507), Harrān (Rice 1952, fig. 14.8–11), Qalʿat Jaʿbar (Tonghini 1998, figs. 65–69), Ruṣāfa (Logar 1991, fig. 5.1, 10, 11, 14, 16) and Wāsīt (Safar 1945, fig. 19.65).

centuries.¹⁴⁸ The latest secure dating is the ‘Mamluk’ phase (c. 1363–76) at the Armenian Garden in Jerusalem.¹⁴⁹

Polychrome painting under a transparent alkaline glaze (Catalogue Pages 27–28, pp. 322–326 & 374–375)

Alkaline-glazed stonepaste wares with polychrome underpainting (‘polychrome’) are rare in the Karak assemblages, accounting for c. 3% of the alkaline-glazed ceramics.¹⁵⁰ There are considerable technical and stylistic variations within this group. The wares are split into four stylistic categories.

Style 1 is represented in the catalogue by three shards (A.4383 [28.5], A.4384 [28.6], A.4385 [28.4]). All are from thin-bodied bowls with a flat disc base supported on a straight ring foot. Too little survives to judge the profile of the upper parts of the bowls. The stonepaste is similar in all cases being pale grey, medium-soft, and sugary in texture. The potting of A.4385 [28.4] is slightly thicker than the others and the foot ring flares out slightly. The glaze has shown no tendency to pool in the centre of the bowl. Geometric designs are found on the interiors, but no evidence for exterior decoration could be detected. Underglaze pigments include black, turquoise, blue, and a rather grainy red-brown or brown pigment.

This style of the decoration is distinct from the other underglaze-painted wares from Karak. The designs radiate from the centre of the bowl and are strictly symmetrical through either one, two or three axes. The abstract composition is mapped out in fine black lines with small areas of colour.¹⁵¹ Large areas of the ground are left unpainted. In the publication of the Ḥamā excavations, the authors call this style of decoration ‘Ruṣāfa ware’.¹⁵² The only reason for this attribution appears to be reports of polychrome wares excavated by de Lorey and Salles in this area.¹⁵³ By contrast, very few shards of style 1 polychrome

¹⁴⁸ For example, see: Burj al-Aḥmar, phase E (Pringle [1986], fig. 51.80), Qaṣr al-Ḥayr East (Grabar *et al.* [1978], pl. G-5; G-2.1b), and Tal Abū Qa‘dān, phase P (Franken and Kalsbeek [1975], fig. 38.12).

¹⁴⁹ Tushingham (1985), figs. 41.35; 44.1.

¹⁵⁰ Total = 27; A = 13, F = 14.

¹⁵¹ Some examples of this ware carry figural designs. For instance, see Institut du Monde Arabe (2001), pls. on pp. 123, 131.

¹⁵² Riis and Poulsen (1957).

¹⁵³ A summary of these activities are given in Rengarten (1929).

are noted in the most recent archaeological work at Ruṣāfa.¹⁵⁴ Small numbers of this style have been excavated in Egypt and Bilād al-Shām.¹⁵⁵ Petrographic and typological analysis by Mason has led him to conclude that polychrome-painted stonepaste wares in a variety of related styles were being produced in both Damascus and sites in northern Syria.¹⁵⁶ The examples found in the south of Bilād al-Shām are probably all to be identified with the workshops of Damascus. Excavated contexts in Jerusalem and Damascus suggest a dating in the second half of the twelfth century. Style 1 polychrome wares were located in the Armenian Garden excavations in a context, dated by the excavators to between 1212 and 1219/1227. Re-examination by Mason of the stratigraphy and coin finds has led to a revised dating of this phase to *c.* 1150–1200.¹⁵⁷ This dating accords well with similar finds in the citadel of Damascus.¹⁵⁸ Interestingly, comparisons can also be drawn with the linear style and sparing use of colour found in some thirteenth-century Syrian enamelled glass.¹⁵⁹

Style 2 is represented by A.4234 [28.3], a carinated bowl with a flat disc base carried on a ring foot. The stonepaste is greyish and medium-hard. Underglaze painting in brown and black is restricted to the interior. The centre of the design is made up of a eight-lobed roundel drawn in pale brown containing a series of black calligraphic strokes. This whole design is surrounded by concentric bands of black. This motif is also found on shards from Ḥamā.¹⁶⁰ Style 3 polychrome (F.7991 [27.18], F.7990 [27.19], F.8164 [28.1], A.4386 [27.21], A.4390 [28.7], F.8201 [28.8]) differs from blue and white wares and turquoise

¹⁵⁴ Logar (1991, 1992 and 1995).

¹⁵⁵ Examples of this style are reported from Aleppo (Gonnella [1999], figs. 3, 4, pl. 26), Alexandria, Kawm al-Dikka (Lane [1949], p. 146); Damascus (McPhillips [2002], pp. 143–45, pl. 1); Fustāt (Arab Museum [1922], pls. 95, 96; Scanlon [1971], p. 225; Ashmolean museum [unpublished], 1959.35, P. 229, P. 235, P. 981); Ḥamā (Riis and Poulsen [1957], figs. 616, 620, 621, 636, 686), Jerusalem, Armenian Garden (Tushingham [1985], fig. 38.6), Qaṣr al-Ḥayr East (Grabar *et al.* [1978], pl. G-1.18d), Raqqā/Rāfiqa (Kouchakji [1923], p. 5.16; Garner [1927], p. 55 and pls.; Milwright [2005], fig. 11.16–18), and Southern Ghawr, Rujūm (MacDonald [1992], pl. 35.c).

¹⁵⁶ Mason (2004), p. 108.

¹⁵⁷ Mason (1997), p. 185; (2004), 99. For the original excavation report, see Tushingham (1985).

¹⁵⁸ McPhillips (2002), pp. 143–45, pl. 1. See also material from twelfth- and early thirteenth-century contexts from the citadel in Aleppo in Gonnella (1999).

¹⁵⁹ Lamm (1930), II, pls. 127.2; 133.2, 5; 136.1 ('Aleppo group', thirteenth-century); 147.23; 151.11, 13 ('Damascus group', *c.* 1250–1310). See also Riis and Poulsen (1957), fig. 281.

¹⁶⁰ Riis and Poulsen (1957), figs. 505, 507, 508, 589.

and black wares only in the addition of one or more underglaze colour to the normal bichrome arrangement. Comparative material appears in dated contexts at Burj al-Aḥmar, phase D (dated as *c.* 1265–1390),¹⁶¹ and Tal Abū Qa‘dān, phase J (dated as *c.* 1250–1401).¹⁶² Other variants of style 3 wares have been excavated elsewhere in the Levant.¹⁶³

Style 4 polychrome is characterised by the use of additional green pigment as part of the underglaze decoration. A.4387–89 [28.2] are shards from a shallow flange rim bowl. The body is heavily potted of a coarse stonepaste. The exterior is decorated in blue and white. On the interior, the decoration of the flange is formed of a vegetal scroll drawn in thin black lines animated with dots of green. The green pigment has acted as a resist to the alkaline glaze. The same green is dotted on the exterior of a shard from a bowl with an inverted rim (F.7992 [27.20]) and a body shard (F.8165 [not illustrated]). As a result, the glaze has pitted over the dots of green. Same green pigment found on shards from Beirut¹⁶⁴ and Fustāṭ.¹⁶⁵ Style 4 polychrome wares were probably produced later than the other polychrome wares. A.4387–4389 [28.2] is similar in profile and decoration to two other shards from the Karak corpus, one blue and white (A.4480 [34.1]), and one blue and white (A.4349 [60.3]). A sage green pigment does appear as an underglaze colour on Iznik pottery between 1540 and 1560,¹⁶⁶ and on Persian ‘Kubachi’ polychrome after *c.* 1550.¹⁶⁷ The Karak shards may be crude examples of the type of polychrome ceramics (often known as ‘Syrian polychrome’ ware) produced in Damascus, and perhaps other Syrian cities, from the late fifteenth to the eighteenth century.¹⁶⁸

Turquoise and black under clear alkaline glaze (Catalogue Pages 28–30, pp. 324–330 & 375–377)

Stonepaste wares painted with turquoise and black under a clear alkaline glaze (‘turquoise and black’) constitute *c.* 1.5% of the total assemblage

¹⁶¹ Pringle (1986), fig. 51.84.

¹⁶² Franken and Kalsbeck (1975), fig. 38.1. For the revised dating of the strata on the site, see Sauer (1976).

¹⁶³ Examples include Fustāṭ (Fouquet [1900], pl. VIII.71a), Ḥayfā, St Mary of Carmel (Pringle [1984a], fig. 9.77) and Ṭabaqat Faḥl (Smith [1973], no. 804).

¹⁶⁴ Anon. (1995), pl. on p. 16.

¹⁶⁵ Ashmolcan (unpublished), P. 725, P. 274.

¹⁶⁶ Atasoy and Raby (1989), cat.nos. 314–76.

¹⁶⁷ Lane (1957), pp. 49–50, 79–80, pls. C, D, G.

¹⁶⁸ Milwright (2000), pp. 200–202.

and c. 13% of the alkaline-glazed ware.¹⁶⁹ The stonepaste is white and has a sugary texture with infrequent ferrous impurities. The bodies of black and turquoise vessels are thickly potted. The glaze is applied evenly and there is little pooling or dripping. The majority of turquoise and black shards come from open bowls with curved sides and supported on ring feet. Rim profiles fall into four basic categories, flange rims, straight rims, inverted rims, and folded over rims. Most are from deep, almost hemispherical bowls. The foot rings all have a slightly flared profile. A.4432 [30.7] comes from a closed vessel shape.¹⁷⁰

There are considerable technical and stylistic similarities with blue and black 'panel style' ceramics in the Karak assemblages, but the turquoise and black group is distinguished by a broader painting style. In some examples, designs are carved into the black underglaze pigment. The external ornamentation of the bowls is usually simple, consisting of horizontal or vertical bands of black. A.4417 [29.7] and F.8006 [28.16] have more complex designs. The decoration of interior space is usually divided into segments or concentric bands around a central roundel. A small repertoire of individual motifs and repeat patterns recur on both the Karak shards and examples of turquoise and black ware from other sites. For example, similar bands of repeated ornament are employed on A.4431 [28.15], A.4394 [29.2] and A.4421 [29.3].¹⁷¹ Another example of this is the 'tree' design on A.4426 [30.1] which is also found elsewhere in Bilād al-Shām and Cyprus.¹⁷² A.4428 [30.2] carries the only example of a Mamluk blazon in the Karak ceramic assemblages. While the format emulates the sultanic epigraphic blazons of the fourteenth century, the text simply reads, *alf al-f...?* The first word may be translated as 'one thousand' (perhaps referring to an amiral rank), though it is possible that the first word can be read as a poorly rendered, *al-ʿizz* ('the glory').

¹⁶⁹ Total = 114: A = 51, D = 2, F = 61.

¹⁷⁰ A closed vessel in this painting style found in Italy is illustrated in Lane (1957), pl. 16A.

¹⁷¹ Comparable decorative bands are reported from Burj al-Aḥmar (Pringle [1986], fig. 51.82), Ḥasbān (Sauer [1973], fig. 4.144), Tal Abū Qa'dān (Franken and Kalsbeek [1975], fig. 38.1), Tal al-Mutasallim (Schumacher [1908], fig. 266), and Tal Qaymūn (Ben-Tor and Portugali [1979], fig. 5.3). See also the decoration of a vase discovered in Italy (Lane [1957], pl. 16A).

¹⁷² Examples are reported from Antioch (Waagé [1948], fig. 55.18), 'Ayn Shams (Grant and Wright [1938-39], pl. L.24), Ḥamā (Riis and Poulsen [1957], fig. 567), and Nicosia (Megaw [1951b], pl. XLV.A4).

Turquoise and black ware is less commonly found on excavation and surveys than blue and black wares (fig. 19). It is reported elsewhere on the Karak plateau,¹⁷³ as well as in the rest of Bilād al-Shām, Egypt, Italy and Cyprus.¹⁷⁴ Turquoise pigment is replaced by green in the glaze of a shard from Quṣayr Qadīm, though it is not clear whether this example can be considered as being from the same ware as the Karak turquoise and black bowls.¹⁷⁵ Polychrome shards from the Karak assemblage such as A.4386 [27.21] and F.8164 [28.1] are part of the same painting style. While the ware appears to be widely dispersed, there is a concentration in Palestine and Jordan. This style of underglaze-painted stoneware was probably manufactured and used in the south of Bilād al-Shām and exported into the Mediterranean via the ports of the Palestinian coast. The low densities of this ware on all sites, and the homogeneity of painting style within the excavated corpus suggests that these wares were produced for a relatively short period of time. Unfortunately, the available archaeological evidence does not allow the chronological parameters to be established with much precision. Turquoise and black wares are reported in stratified contexts at Burj al-Aḥmar, phase E (c. 1390–c. 1920), Tal Abū Qa‘dān, phase J (c. 1250–1401),¹⁷⁶ and Ḥasbān (c. 1260–1401). The pottery from Ḥayfā is dated by Pringle to the second half of the thirteenth century,¹⁷⁷ though the presence of blue and white stoneware wares indicates an additional occupation phase in the late fourteenth or fifteenth century. The tripartite epigraphic blazon depicted on A.4228 [30.2] is also consistent with a fourteenth-century date.¹⁷⁸

¹⁷³ Miller survey, sites 108, 215, 427.

¹⁷⁴ Examples are reported from Aleppo (Atıl [1981], p. 153, cat. 66); Antioch (Waagé [1948] fig. 55.18), ‘Ayn Shams (Grant and Wright [1938–39], pl. L.24), Burj al-Aḥmar (Pringle [1986], fig. 51.82, 84, survey sites: 3, 4, 20, 28, 32), Fuṣṭāt (Arab Museum, Cairo [1922], pls. 100, 104; Bahgat and Massoul [1930], pl. XLVI), Ḥayfā, St. Mary of Carmel (Pringle [1984a], fig. 9.75), Ḥamā (Riis and Poulsen [1957], fig. 567), Ḥasbān (Sauer [1973], fig. 4.144), Italy (Lane [1957], pl. 16A), Nicosia (Megaw [1951b], pl. XLV.A4), Raqqā (Kouchakji [1923], p. 5.16), Tabaqaṭ Faḥl (Smith [1973], pl. 72.804), Tal Abū Qa‘dān (Franken and Kalsbeck [1975], fig. 38.1), Tal Barrī (Pecorella [1983], fig. 5 [top LH corner]), Tal al-Mutasallim (Schumacher [1908], fig. 266), Tal Qaymūn (Ben-Tor and Portugali [1979], fig. 5.3).

¹⁷⁵ Whitcomb and Johnson (1982), fig. 38.q.

¹⁷⁶ According to the revised dating in Sauer (1976).

¹⁷⁷ Pringle (1984a).

¹⁷⁸ Mayer (1933), pp. 34–35. Such tripartite blazons were employed by the sultans from the time of al-Nāṣir Muḥammad b. Qalāwūn. Other examples of similar blazons on underglaze-painted blue and black vessels are from Fuṣṭāt (Arab Museum [1922], pls. 100, 104; Bahgat and Massoul [1930], pl. XLVI) and Ḥamā (Riis and Poulsen

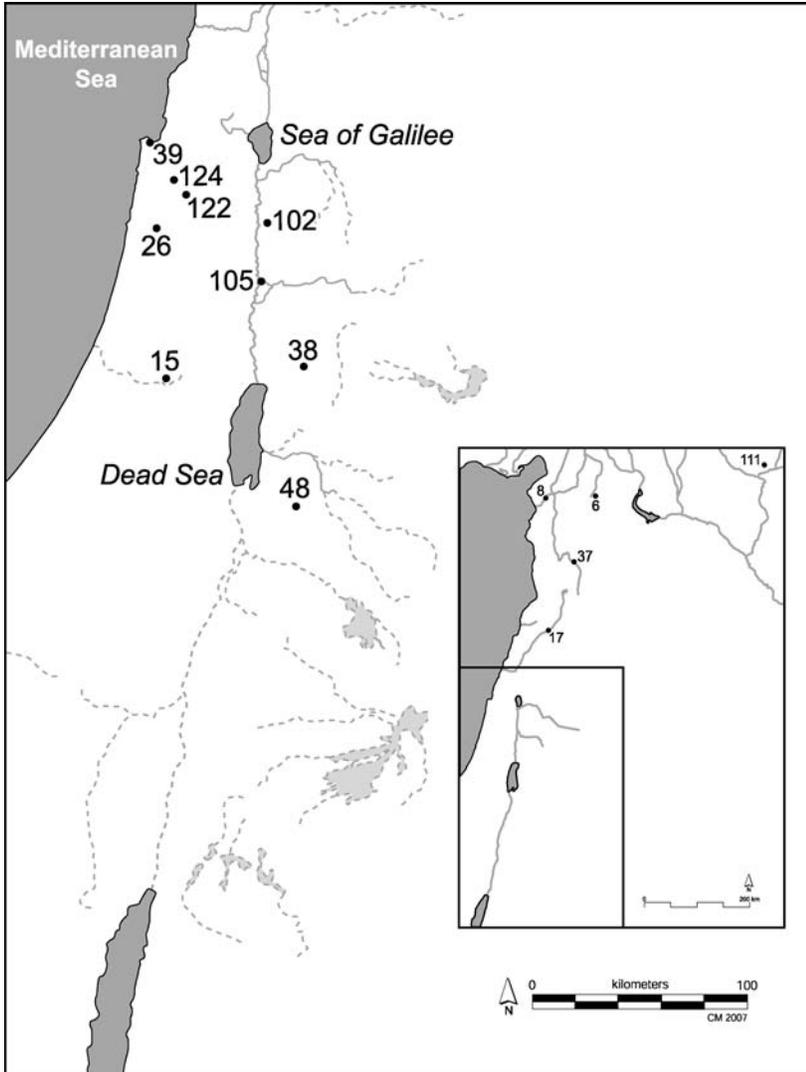


Figure 19. Distribution in Bilād al-Shām of turquoise and black stonepaste.

Blue and black under clear alkaline glaze (Catalogue Pages 30–34, pp. 328–336 & 377–381)

Stonepaste painted in blue and black under a transparent alkaline glaze ('blue and black') constitute *c.* 2% of the total assemblage and *c.* 21% of the alkaline-glazed wares.¹⁷⁹ The stonepaste is generally white with a sugary friable consistency and few impurities. The alkaline glaze is transparent, frequently with a greenish tinge. The cobalt pigment has often blurred or run under the glaze during the firing process. The blue and black group contains a range of open and closed vessel shapes. The rim fragments from open vessels can be split into five categories, flange rim bowls, curved bowls with straight rims, curved bowls with inverted rims, curved bowls with everted rims, and carinated bowls. The bases from open vessels split into three main types, slightly flared ring base rising to a steep curved body, low ring base supporting a flat base shallow bowl, and almost flat disc bases rising to a steep body. The closed vessels are jars with bulbous bodies and narrow necks.

Blue and black ware is a large and diverse group in the Karak assemblage, but a few significant features can be highlighted. Flange rim bowls exhibit common stylistic features. Blue pigment is restricted to the interior of the bowl. The exteriors are painted in black with concentric bands and repeated vertical lines or simple arcades. The decoration of the interiors is more varied. On A.4450 [31.6] and F.8065 [32.2], the flange section is covered with repeated abstract designs. The whole interior of A.4457 [32.1] is composed of a radial pattern formed with blue pigment with more detail added in black.¹⁸⁰ Straight rim bowls tend to have a deeper profile than the previous category. The only major typological distinction is the presence of a small ledge handle on F.8071 [30.19]. A.4514 [30.21] is also notable for the broad painting style and the poor quality pockmarked glaze.

F.8079 [31.1] is a rim shard from a large splayed rim bowl with a diameter of *c.* 480 mm. Body shards and a section of the base (F.8080–8083 [31.2–5]) were also recovered from area F. The walls are extremely thick in order to support the weight of the bowl. The frit-paste is both harder and coarser (containing occasional large ferrous

[1957], fig. 797). An unprovenanced turquoise and black bowl carrying a tripartite blazon similar to the Karak shard was auctioned in London in 1992. See Christie's (1992), lot no. 30.

¹⁷⁹ Total = 185: A = 75, C = 1, D = 7; F = 102.

¹⁸⁰ Comparable decoration is found at Ḥamā (Riis and Poulsen [1957], no. 733).

impurities) than the previous examples. Blue pigment is restricted to the interior of the bowl. On the interior the decoration is formed of broad curvilinear motifs filled with more delicate abstract or vegetal ornament. I am unaware of other examples of a blue and black bowl of the Ayyubid-Mamluk period constructed on such a scale. The rarity of this type suggests that the production of a frit-paste bowl of this size was a major technical accomplishment. It may have been made as part of a specific commission though a dedicatory inscription or a 'signature' of the potter are conspicuous by their absence. Two bowl rims (F.8077 [30.16] and F.8078 [30.17]) have a carination in the upper part of the bowl and a slightly everted rim. This profile is found in other blue and black ware vessels from excavations in Bilād al-Shām,¹⁸¹ and is also a common feature of 'Suṭṭānābād' wares. Some comparisons can also be made with large metalwork basins of the Mamluk period.¹⁸²

Parallels can be located for some of the designs painted on blue and black bowls from Karak. The repeated 'fir tree' motif on the exterior of F.8064 [30.9] is also found on blue and black shards from Khirbat Fāris and Tripoli.¹⁸³ The floral pattern on F.8064 [30.9] can also be seen in shards from Ḥamā and Tripoli.¹⁸⁴ Decorative roundels are common on base shards. The symmetrical vegetal motif found in A.4463 [33.7] and F.8093 [31.9] is relatively common.¹⁸⁵ A.4463 is a small scale vessel and may relate to 'Egyptian miniature' style identified by Arthur Lane among the stonepaste wares of Fustāṭ.¹⁸⁶ The zigzag motif on F.8078 [30.17] is found on bowls from Egypt and Bilād al-Shām.¹⁸⁷

In some cases the whole space of the interior is taken up with a single design. A.4469 [31.7] has been underpainted blue with small areas of white reserved creating calligraphic shapes. The design of A.4474 [33.4] is a symmetrical design based on elegant curvilinear forms. F.8198 [31.10] has a decoration of waterweeds derived from Chinese blue and

¹⁸¹ Examples are reported from: Ḥamā (Riis and Poulsen [1957], no. 717); Jerusalem citadel (Johns [1950], pl. LXII.6, 7).

¹⁸² Lane (1957), pl. 4; Grube (1976), no. 209; Allan (1982), nos. 20, 22.

¹⁸³ Johns *et al.* (1989), fig. 27.58; Salamé-Sarkis (1980), pl. LXI.2.

¹⁸⁴ Riis and Poulsen (1957), no. 706; Salamé-Sarkis (1980), pl. LXI.3.

¹⁸⁵ Similar examples appear on a 'turquoise and black' shard from Karak (F.8013). Other comparanda for this design are reported from: Fustāṭ (Wallis [1891], appendix, pl. XLVII.3); and St Mary of Carmel, Ḥayfā (Pringle [1984a], fig. 9.75).

¹⁸⁶ Cf. Lane (1957), pp. 19–20, pl. 16.B.

¹⁸⁷ Cf. Fustāṭ (Bahgat and Massoul [1930], ol. XXXVIII.4); Ḥasbān, 'early Mamluk' phase (Sauer [1973], fig. 143).

white porcelain. Stylistically, this piece has more in common with blue and white pottery.¹⁸⁸ A.4465 [32.7] contains a depiction of the wing of a bird and the trunk of a stylised tree. The background is made up of sketchily drawn trilobed leaves, other dots and dashes and the sparing addition of blue. This design is reported on examples excavated in Egypt and Syria.¹⁸⁹ Two comparable bird design shards from the Metropolitan Museum were submitted to neutron activation analysis and a Syrian provenance was suggested.¹⁹⁰ The most common group divides the space of the interior into radial segments, sometimes with the addition of a central roundel. Specific parallels can be identified for some of the designs found at Karak.¹⁹¹

A.4481 [32.6] is constructed of a whiter and more friable stonepaste and decorated with a complex design. A.4477 [32.5] is from a smaller scale bowl but shares many of the characteristics of stonepaste, glaze and underpainting style of A.4481 [32.6]. The feature which confirms the high craftsmanship is the cartouche on the underside of the base. Inscriptions and 'signatures' are well known on the bases of Middle Islamic underglaze painted wares.¹⁹² The care with which the design was rendered does not, to my knowledge, have any parallel in the published material from the Levant. Unfortunately, the inscription is incomplete and impossible to decipher due to the corrosion of the glaze. A.4478 [32.3] and F.8089 [32.4] are flat disc bases glazed on interior and exterior. An unusual feature of these pieces is that the decoration of the upper and lower discs is very different. The inscription bands on F.8089 [32.4] are illegible although the format suggests an architectural or numismatic source. The Karak corpus contains a very similar shard

¹⁸⁸ A similar design is found on a shard from Fustāt. Ashmolean Museum: P. 243.

¹⁸⁹ Examples are reported from: Ba'albak (Sarre [1925], p. 127, figs. 48, 52); Damascus (Migeon [1923], pl. on p. 338); Fustāt (Wallis [1891], appendix: pl. VII.2; Bahgat and Massoul [1930], pl. XXXVIII.2); Ḥamā (Riis and Poulsen [1957], figs. 745–48). Other animals are also represented on the same vegetal background at: Fustāt (Wallis [1891], appendix: pl. XVII.7; Arab Museum, Cairo [1922], pl. 116); and Ḥamā (Riis and Poulsen [1957], figs. 750–51). A somewhat different bird design can be seen on the base of a vessel from the citadel in Aleppo (Gonnella [2006], fig. 7).

¹⁹⁰ Jenkins (1984), pl. 3c, 5a.

¹⁹¹ For instance, A.4466 [56.1] and Fustāt (Ashmolean Museum: P. 248) and Tripoli (Salamé-Sarkis [1980], pl. LXIII.4); A.4470 and Ḥamā (Riis and Poulsen [1957], nos. 663, 709); A.4472 and Fustāt (Ashmolean Museum: 1978.2451); and Tripoli (Salamé-Sarkis [1980], pl. LXIII.8) A.4473 and Ḥamā (Riis and Poulsen [1957], no. 735); F.8095 and Damascus, Bāb Sarīja (Toueir [1973], pl. IIIb.a).

¹⁹² Studies of these 'signatures' on the pottery of the Ayyubid-Mamluk period include Fouquet (1900); Bahgat and Massoul (1930); Abel (1930); and 'Abd al-Rāziq (1967).

to these examples decorated in blue and white (A.4342 [34.14]). The possible function of these unusual objects is discussed in the following section. Closed vessels are represented in the catalogue by A.4494 [33.10], A.4495 [33.11], F.8063 [30.14]. The motifs on the body shard, A.4495 [33.11] are paralleled in shards from Ba'albak, Fustāt and Ḥamā.¹⁹³ F.8063 [30.14] is the rim and neck of a jar. Similar profiles are reported from sites in Egypt and Bilād al-Sham.¹⁹⁴ Jars of this type were used as storage vessels for valuable products such as medicine and preserved fruit. Jars are reported in written sources in Spain, Italy, Sicily, and France,¹⁹⁵ and surviving examples have been recovered from all over the Mediterranean.

The blue and black wares from Karak can be divided into three basic groups that may also be organised into chronological phases. The first phase of Syrian blue and black may be dated to the first half of the thirteenth century on the basis of finds from Raqqa/Rāfiqa and elsewhere.¹⁹⁶ These pieces tend to be finely potted from a compact stonepaste that is sometimes pale grey in colour. The sparing use of blue is noted in the painting of some examples. Probable examples of this early phase are A.4454 [30.13], F.8066 [30.18] and F.8071 [30.19]. The second group is the most numerous and exhibits a stylistic affiliation to the so-called 'panel style' found on Persian 'Sultānābād' wares. These examples are all made of more friable white stonepaste and tend to be potted with thicker walls than the first phase. The first 'Sultānābād' style, which combines blue and black pigments under a colourless and turquoise transparent glazes, is the main inspiration for Levantine potters.¹⁹⁷ The painting style on the Karak examples tends to be less densely patterned, and the use of turquoise is uncommon (see polychrome wares: style 3). The draughtsmanship becomes more rigid and formalised with animal representation being rare. Archaeological

¹⁹³ Sarre (1925), pl. 44; Ashmolean Museum: P. 272; Riis and Poulsen (1957), no. 736.

¹⁹⁴ For instance, Ba'albak (Sarre [1925], pl. 51.g); Fustāt (Bahgat and Massoul [1930], pl. K.82); Qaṣr al-Ḥayr East, period 2 (Grabar *et al.* [1978], pl. G-7.2a, 2b); and Quṣayr Qadīm (Whitcomb and Johnson [1979], pl. 51.g).

¹⁹⁵ Lane (1957), p. 17.

¹⁹⁶ For instance, see Qal'at Ja'bar (Tonghini 1998, 47: ware AH), Raqqa (Sauvaget [1948], nos. 77, 78; Milwright [2005], fig. 15.12–18), Samsat (Öney 1994, 289, pl. 281), and 'Tal Minis' (Porter and Watson 1987, pl. 10).

¹⁹⁷ Lane (1957), p. 11, pls. 1–6.

evidence suggests a chronological range from the later thirteenth through to the latter part of the fourteenth century for these examples. Other styles of painting are also represented in this phase. The designs painted on shards such as A.4454 [30.13], A.4469 [31.7], A.4514 [30.21], and F.8089 [32.4] owe little to Persian pottery. The third phase comprises those blue and black wares that bear signs of the influence from the types of Chinese blue and white porcelain that was appearing in Bilād al-Shām from the last quarter of the fourteenth century (this issue is discussed in greater detail in the next section). The introduction of some Chinese inspired themes can be seen on some blue and black shards from Karak including the ‘cloud’ forms on A.4474 [33.4], the ‘rock pool’ motifs on A.4480 [34.1], and the vegetal designs on A.4480 [34.1] and F.8198 [31.10].

The sugary-white stoneware of the majority of the Karak group suggests a Syrian provenance. Blue and black wares have been found in association with kilns around Bāb Sharqī in Damascus,¹⁹⁸ and kilns producing a range of glazed stoneware wares have been located elsewhere in Syria and perhaps in Palestine.¹⁹⁹ Blue and black pottery is reported elsewhere on the Karak plateau,²⁰⁰ and is also found commonly in the remainder of the Levant (fig. 20).²⁰¹ As yet there has been very little success in assigning styles of painting to individual towns or regions. The fact that potters travelled and produced ceramics in different urban

¹⁹⁸ Contenau (1924), pl. XLIX; Raphael (1924), p. 20; Carswell (1979), p. 19; Jenkins (1984), p. 104.

¹⁹⁹ Recent excavations near Jerusalem have led to the recovery of what may be a workshop for the production of stoneware wares. Nitzan Amitai-Preiss (personal communication).

²⁰⁰ Miller survey, sites 108, 211, 214, 215 (unpublished). Other examples are reported from Khirbat Fāris (Johns *et al.* [1989], fig. 27.58).

²⁰¹ Examples are reported from Aleppo (Gonnella [2006], fig. 7), Alexandria, Kawm al-Dikka (Lane [1949], p. 146), Ba‘albak (Sarre [1925]), Bālis (Rengarten [1929], pl. XXVIII), Burj al-Aḥmar (Pringle [1986], 51.83, 86; survey sites 3, 4, 20, 28, 32), Damascus, Bāb Sarīja (Toucir [1973], pl. IIIb.a), Fuṣṭāt (Bahgat and Massoul, 1930: passim), Ḥayfā, St. Mary of Carmel (Pringle [1984a], fig. 9.75), Ḥamā (Riis and Poulsen [1957]), Ḥasbān (Sauer [1973], fig. 143), Jerusalem, Citadel (Johns [1950], pl. LXII.5), Qaṣr al-Ḥayr East (Grabar *et al.* [1978], pl. G-7.2a, 2b), Quṣayr Qadīm (Whitcomb and Johnson [1979], pl. 51.g), Southern Ghawr, Rujūm (MacDonald [1992], pl. 35.b), Ṭabaqat Faḥl (McNicoll *et al.* [1992], pl. 127.7), Tal Barrī (Pecorella [1983], fig. 5), ‘Tal Minis’ (Porter and Watson [1987], p. 205), Tal al-Mutasallim (Schumacher [1908], fig. 266), Tal Qaymūn (Ben-Tor *et al.* [1979] fig. 5.3), Tal Saylūn (Andersen [1985], pl. 11.179), and Tripoli (Salamé-Sarkis [1980], pl. LXIII.8).

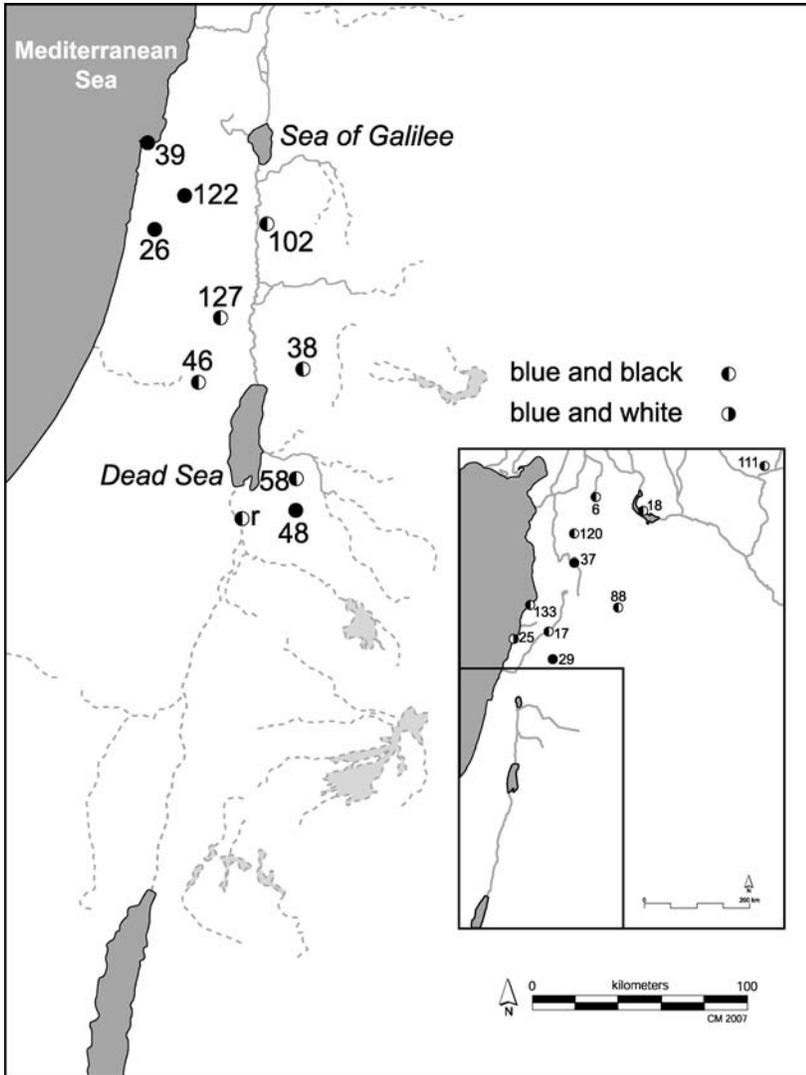


Figure 20. Distribution in Bilād al-Shām of blue and black stonepaste and blue and white stonepaste.

centres²⁰² makes it unlikely that the decorative styles of blue and black wares will ever form the basis of a reliable guide to provenance.

Blue painted under a colourless alkaline glaze (Catalogue Pages 34–36, 335–340 & 381–383)

Blue painted under a colourless alkaline glaze (from now on called ‘blue and white’) constitutes *c.* 1.5% of the total assemblage and *c.* 14.5% of the alkaline-glazed wares.²⁰³ Dripping and pooling of the glaze are common in this ware, features which were perhaps exacerbated by the ability of cobalt pigment to act as a flux.²⁰⁴ One shard (A.4329 [35.6]) also has the addition of turquoise pigment in limited parts of the design. The majority of the shards are from open bowls. The rims are split into four basic categories: deep bowls with flange rims; deep curved bowls with straight rims; curved bowls with inverted rims; and curved bowls with everted rims. Base shards fall into two basic types: ring feet with flared sides; and disc bases. The foot rings all support bowls with deep curved bodies. A small group of closed vessels (jugs and jars) was also identified.

Flange rim bowls are the most common type. These shards all come from medium diameter bowls (*c.* 270–320 mm) and exhibit common characteristics of ceramic paste and glaze type. A.4295 [35.1] and A.4305 [35.4] have an up-turned lip while A.4308 [34.9] has a scalloped edge. The colour of the cobalt pigment and the sharpness of the painting beneath the glaze vary. The painting style and the choice of motifs reflects the dominant influence of Chinese painted porcelain. The edge of the rim of A.4308 [34.9] is shaped into a wave pattern and has stylised wave and rock patterns painted on the flange. Scalloped edges are reported on a Syrian bowl from Ḥamā.²⁰⁵ Other comparanda are available in the Chinese porcelain in the Topkapi museum. Comparable rims with scalloped edges and river and rock designs to A.4308 occur on shallow serving bowls of fourteenth-century date.²⁰⁶ The flange

²⁰² See, for instance, the study of *nishas* on the ‘signatures’ found on stonepaste wares from Cairo and Damascus. Abel (1930); Jenkins (1984).

²⁰³ Total = 127: A = 92, B = 3, F = 32.

²⁰⁴ Watson (1985), p. 33.

²⁰⁵ Riis and Poulsen (1957), no. 779.

²⁰⁶ Pope (1970), pls. 9, 10a, 11, 12, 14b, 15. It has recently been suggested (following initial comments made by R.L. Hobson in the 1920s) that some of the ‘blue and white’ porcelain of this type may come from the kilns of the Southern Sung dynasty

of A.4295 [35.1] is decorated with a vegetal design derived from the 'crapemyrtle and blackberry lily' border seen in Chinese ceramics in the Topkapi and the Tughluqid palace, Dehli.²⁰⁷ The vegetal band on the cavetto of A.4305 [35.4] is found on stonepaste shards from Ḥamā, and fourteenth-century Chinese imports in Dehli and the Topkapi.²⁰⁸ The motif employed in a repeat band on the exterior of F.8167 [35.3] derives from the 'lotus panel' found on Chinese ceramics of the fourteenth century. Examples of this pattern can be seen in porcelain at the Topkapi, and a Yuan period bowl shard from Fuṣṭāṭ.²⁰⁹ The same motif also appears on Persian blue and white wares.²¹⁰

The second group is deep bowls with straight rims.²¹¹ The exterior rims of A.4290 [34.4], A.4306 [34.11] and A.4307 [34.10] have a simple repeated garland beneath a thin concentric band. The main decoration of all these bowls is floral and vegetal features which mix Chinese-inspired and Islamic devices. Perhaps the fullest use of Chinese motifs is to be found on A.4290 [34.4]. The third rim category is bowls with inverted rims. The exterior of A.4377 [34.3] has a Chinese 'lotus panel' on the lower section while the upper band has Islamic geometric ornament. Both the style of the plants and the division of the space with six trefoil patterns on the interior are derived from Chinese ceramics. The trefoil device is seen on Chinese pottery of the fourteenth century from Damascus, the Tughluqid palace, Dehli, and the Topkapi.²¹² The second shard (F.8172 [34.6]) is a rim from a smaller vessel. The exterior has another variant on the 'lotus panel' and the interior is ornamented with a diamond shape containing cloud or wave patterns. A shard painted in similar style was found in phase I during the excavation of the 'reception hall' at Karak.²¹³

(1127–1279). An example of a flange rim bowl with a scalloped edge carrying wave and rock designs found at Tuotekuo in Inner Mongolia is illustrated in Kessler (1993), fig. 90, and see discussion on pp. 136–43. This early dating has not met with wide acceptance.

²⁰⁷ Pope (1970), pl. B.5, 7a, 10b; Carswell (1979), pl. VII.

²⁰⁸ Riis and Poulsen (1957), nos. 777, 778; Carswell (1979), pl. XI; Pope (1970), pls. 3–6, 7b, 8.

²⁰⁹ Cf. Pope (1970), pls. B.5, 6; 21, 22, 24; Carswell (1985), pl. 12c.

²¹⁰ Lane (1957), pl. 18; Grube (1976), no. 258.

²¹¹ Comparable straight rim bowls have been found at Cairo (Gayraud [1986], pl. XXV.54) and Ḥamā (Riis and Poulsen [1957], no. 791). Fourteenth-century Chinese 'blue and white' also adopts this profile. For instance, Pope (1970), pls. 18–21.

²¹² Carswell (1979), pls. 1, VII–IX; Pope (1970), pl. 15.

²¹³ Brown (1989), fig. 5.4.

F.8166 [34.7] is from a small drinking cup a flared rim. The bowl probably stood on a straight ring foot. The stonepaste is slightly yellow in colour and more compact than most of the Karak group. The bowl may be mould cast. Small scale blue and white tea bowls are found in early fourteenth-century Chinese ceramics from the Yuan period.²¹⁴ Later examples are also reported at Julfār in the Persian Gulf and Tūr, the port in the southern Sinai.²¹⁵ Sources describe the use of small porcelain or celadon bowls at informal court occasions among Mamluk amirs in Cairo,²¹⁶ and it seems likely that Syrian imitations of such imported bowls would have probably performed similar functions. If this piece was designed as a coffee cup, then it would likely have to be dated after *c.* 1534 (the first record of coffee-drinking in Damascus).²¹⁷ Similar small coffee cups were produced in larger numbers by the potters of Kūtahya in Turkey during the seventeenth and eighteenth centuries. Examples of Kūtahya coffee cups have been found in excavations in Bilād al-Shām.²¹⁸

A.4342 [34.14] is a flat disc covered in a thick glaze. The piece may be mould cast. The upper section is related to decoration on shards such as: A.4327 [35.7] and A.4377 [34.3], but the form has closest affinities with two blue and black shards from the Karak corpus (A.4478 [32.3] and F.8089 [32.4]). These shards are of very similar scale and profile and may have functioned as lids. Lids are rare in Middle Islamic decorated ceramics but are found in Persian underglaze painted wares.²¹⁹ Unlike the Persian example, the Karak pieces do not have handles. Metalwork of this period contains cylindrical boxes with flat lids,²²⁰ but the closest comparisons seem to be with Chinese pottery. John Carswell published an ovoid porcelain pen box and cover of late fifteenth-century date bought in Damascus.²²¹ Circular containers with flat lids can be found on Yuan,²²² and sixteenth-century Ming blue and white porcelain.²²³

²¹⁴ Yeo and Martin (1978), pl. 2 (top). The same profile is also found on a larger Syrian 'blue and white' bowl from Hamā (Riis and Poulsen [1957], no. 787).

²¹⁵ Hansman (1985), fig. 8.j; Kawatoko (2001), fig. 5.10.

²¹⁶ For instance, Ibn Iyās (1960–74), i.2, p. 393.

²¹⁷ Rafeq (2001), p. 128.

²¹⁸ Evidence summarised in Milwright (2000), p. 198. See also François (2002), fig. 4.4, 5.

²¹⁹ Grube (1976), no. 202.

²²⁰ Allan (1982), pp. 74–75, no. 11.

²²¹ Carswell (1979), pl. XXIV.

²²² Xinyuan (1993), pl. 1; Addis (1968c), pl. 1.

²²³ Jenyns (1953), pl. 81.a.

A.4309 [34.8] and F.8175 [34.12] are from closed vessels. A.4309 is the neck a pitcher constructed of a very friable white paste. The rim has been pinched to form a spout. The decoration is made up of feather motifs arranged vertically around the neck of the vessel. This motif can be found on the necks of Yuan period blue and white vessels, and the closest parallels belong to the Hongwu period (1369–98).²²⁴ The shape of the spout may derive from incised metalwork or glass. The flat surface and absence of glaze on one side of A.4351 [35.10] indicate that it is probably part of a tile. To the best of my knowledge no evidence for tiling has been located on any of the structures inside the fortress of Karak.

Blue and white shards have been located in great numbers at Fuṣṭāt,²²⁵ and this ware has also been found in Cairo,²²⁶ and at Kawm al-Dikka in Alexandria.²²⁷ Many complete examples of bowls and jars exist in museum collections. This picture contrasts with the low numbers of the ware recovered on the Karak plateau,²²⁸ and controlled excavations in Bilād al-Shām (fig. 20).²²⁹ Very few excavated contexts from the fifteenth century and later are reported in Syria.²³⁰ In Palestine and Jordan the low densities of blue and white in Middle Islamic assemblages may also reflect the economic decline of southern Syrian provinces in the later Mamluk period.

Blue and white porcelain is clearly a dominant influence behind many of the stylistic features in the Karak group, and so additional comparative material was sought in the Chinese pottery found in the Islamic world and elsewhere. The same degree of imitation of Chinese models can also be seen in the blue and white ceramics of Iran in the late fourteenth to fifteenth century,²³¹ and in Iznik (*c.* 1480–1520).²³²

²²⁴ Wei (2005). Cf. Beamish (1995), figs. 5, 17; Xinyuan (1993), pl. 5; Addis (1968c), pl. 27.

²²⁵ For instance, see Scanlon (1984).

²²⁶ Gayraud (1986).

²²⁷ Lane (1949), p. 146.

²²⁸ Miller survey, site 108 (unpublished).

²²⁹ Examples are reported from Beirut (Carswell [1979], pl. XIV), Burj al-Aḥmar (Pringle [1986], 51.87; survey sites 3, 4, 32), Damascus, Bāb Sarīja (Toueir [1973], pl. IIA.f), Hayfā, St. Mary of Carmel (Pringle [1984a], fig. 9.78), Ḥamā (Riis and Poulsen [1957], fig. 791), Karak (Brown [1989], fig. 5.5), and Tal al-Mutasallim (Schumacher [1908], fig. 266).

²³⁰ For a survey of the ceramics of the late Mamluk and Ottoman periods, see Milwright (2000).

²³¹ See Golombek *et al.* (1996).

²³² Atasoy and Raby (1989), pp. 121–28.

The group of shallow flange rim bowls (A.4295 [35.1], A.4301 [35.2], A.4305 [35.4], A.4308 [34.9], F.8167 [35.3] and A.4349 [36.3]) are particularly close in profile and decoration to the type of large presentational vessel imported into the Middle East at the end of the fourteenth century.²³³ Deep bowls with straight rims (e.g. A.4290 [34.4]) also derive from late fourteenth-century Chinese imports. The lid (A.4342 [34.14]) and the drinking cup (F.8166 [34.7]) are further examples of close copies of Chinese prototypes.

In addition to the dating provided by stylistic comparisons with Chinese prototypes, some evidence can be adduced from the archaeological record. A group of stonepaste blue and white pieces was recovered from Ḥamā. Most of the blue and white wares probably predate the destruction of 1401.²³⁴ 'Blue and white' shards were also found in association with the foundations of the Madrasa of Tatār al-Ḥijāziyya in Cairo. The building was founded in either 748/1348 or 761/1360.²³⁵ A date in the mid fourteenth century may be proposed for the blue and white shards, though Gayraud notes the possibility of later contamination in some excavated contexts. The production of stonepaste pottery in the urban centres of Syria was probably seriously affected in the decades following the capture of the region by Ṭīmūr in 1401,²³⁶ though there is circumstantial evidence to suggest that glazed stonepaste wares continued to be made in Damascus and exported through much of the fifteenth century.²³⁷ The introduction of polychrome Turkish pottery into the Levant in the second quarter of the sixteenth century may have signalled the decline in the production of blue and white wares in Bilād al-Shām.

²³³ Other Syrian imitations of Chinese patterns are reported at Damascus, Bāb Sarīja (Toueir [1973], pl. Iia.c.), Ḥamā (Riis and Poulsen [1957], pls. 777–79), and Tal al-Mutasallim (Schumacher [1908], fig. 266).

²³⁴ There are problems with the dating of the final phase of the citadel, however. The presence of tobacco pipes, as well as a range of imported glazed wares dating between the fifteenth and the eighteenth century indicate that the site remained in use much later than 1401. See Johns (1998); Milwright (2000), p. 192.

²³⁵ Gayraud (1986).

²³⁶ Clavijo remarks that Ṭīmūr took all the 'makers of porcelain and glass' (according to the translation by Le Strange) back to Samarqand following the capture of Damascus in 1401. See Clavijo (1928), pp. 287–88.

²³⁷ For instance, Florentine inventories contain numerous references to ceramics '*alla domaschina*' through the fifteenth century, with the latest document dating to 1494. It should be noted, however, that the vessels may have entered the documented collections at much earlier dates. See Spallanzani (1974), p. 169 (Appendix A, document 25).

Lustre ware (Catalogue Page 36, pp. 338–340 & 383)

Two shards of blue alkaline-glazed lustre ware were found in area F. Both are constructed of a pale grey stonepaste with a granular texture and regular voids. The deep blue glaze shows no evidence of pooling or dripping, but the dull gold-green lustre²³⁸ has corroded so that only parts of the original design are visible. F.8199 [36.4] is a ring foot with slightly flared sides and F.8200 [not illustrated] is a body shard perhaps from the same vessel. The decoration takes the form of freely painted plant scrolls and bunches of fruit.

The first evidence for the production of lustre-painted pottery in Syria dates to the last quarter of the eleventh century, and this mode of decoration continued in a variety of centres during the twelfth and thirteenth centuries. Raqqa in northern Syria is reputed to have been a major production site for lustre wares prior to the destruction of the city by the Mongols in 1259.²³⁹ Other centres for lustre were probably located along the Euphrates in Syria and southeastern Anatolia.²⁴⁰ Typical examples of the 'Raqqa' style make use of a copper-coloured lustre over a colourless alkaline glaze, often with the addition of some underglaze painting in blue. The copper-coloured lustre is also reported on imported Spanish glazed wares dating from the late fourteenth and fifteenth centuries found in the Middle East.²⁴¹ The technique of painting golden lustre over a deep cobalt blue (or sometimes manganese purple) glaze is less common, though examples are reported on a few excavations.²⁴² Significantly, a vase decorated in this manner now in

²³⁸ The golden colour of the lustre probably indicates that the lustre pigment contained more silver than copper. See Watson (1985), p. 31. For modern recipes for different coloured lustres, see Caiger-Smith (1985), pp. 205–206.

²³⁹ Lane (1957), pp. 38–39; Grube (1963). Some lustre shards have been recovered during recent excavations within the walled city of Raqqa/Rāfiqa, but archaeological research has not yet provided definitive evidence that it was manufactured there. For examples of lustre shards, see Milwright (2005), fig. 15.19–21.

²⁴⁰ Tonghini (1998), pp. 47–51; Redford and Blackman (1997). See also Mason (2004), pp. 91–120.

²⁴¹ For example Alexandria, Kawm al-Dikka (Kubiak [1969], pp. 12–13), Beirut (Rita Dagher, personal communication), and Fustāt (Kubiak and Scanlon [1979], p. 112). Another possible example from Fustāt is published in Mostafa (1949). For an example of Spanish blue-glazed lustre, see Kuwait National Museum (1983), no. 86.

²⁴² Examples are reported from Alexandria (Kubiak [1969], pp. 12–14), Antioch (Waagé [1948], p. 90), Bālis (2001 season, unpublished), Tal Minis (Porter and Watson [1987], p. 203, nos. P8830, P8839; and see pp. 218–19: C17, C18, C21), Qasr al-Hayr East (Grabar *et al.* [1978], pl. G-2.21b [no. A/C/4/70]). Two blue-glazed lustre vases are said to have been found in Trapani in Italy (Lane [1957], pl. 8 [and see also pl. 9]; Ail [1981], p. 175, no. 84).

the Kuwait National Museum carries the inscription, ‘Made for Asad al-Iskandarānī, the work of Yūsuf in Damascus, painter’.²⁴³ The Damascene provenance of the Karak shards was confirmed by petrographic analysis of F.8199.²⁴⁴ There is little solid dating information from the archaeological record. The lustre fragments from Antioch were probably deposited before the destruction of the city in *c.* 1268,²⁴⁵ while the blue-glazed lustre shards from Qaṣr al-Ḥayr East appear in the twelfth- to fourteenth-century reoccupation phase. Mason places the production of this style of Syrian lustre between 1200 and 1250, and this pre-Mamluk date is also suggested in the analysis of the ceramics from Ayyubid contexts in the recent excavations in the citadel of Damascus.²⁴⁶

Section 3: Chinese Imports (Catalogue Page 36, pp. 338–340 & 383)

Imported pottery from Southeast Asia accounts for only twenty shards in the Karak assemblages.²⁴⁷ Celadon (‘green ware’) is the most common of the wares accounting for 75% of the group. The remainder is made up of blue and white porcelain, one piece of *qingbai* ware, and one piece of *shufu* ware.²⁴⁸ Celadon, porcelain and the other two types are easily distinguished from the Islamic pottery by the very hard, vitrified ceramic fabric and even, glassy glazes.²⁴⁹ In the case of celadon and *shufu* wares, the fabric is grey in colour and with porcelain and *qingbai* ware, off-white. Occasional ferrous impurities were noted in most shards.

The celadon shards in the Karak assemblage can be divided into two groups according to the colour of the glaze. The first group are

²⁴³ Jenkins (1983), no. 84. Lane ([1957], p. 16) also remarks, ‘...the same style and technique, with lustre ranging from silver through to brassy yellow to a dull brown, is seen on a good many blue-glazed fragments found at Fustat and in the potters’ quarter outside the east gate of Damascus’. See also Migeon (1923).

²⁴⁴ Mason and Milwright ((1998), pp. 185, 187).

²⁴⁵ Imported European glazed pottery dating to the fifteenth-seventeenth century does appear in the pottery publication, indicating a later period of reoccupation on the site. See Milwright (2000), pp. 197, 203.

²⁴⁶ Mason (2004), p. 109; Stephen McPhillips (personal communication).

²⁴⁷ T = 20; A = 8, D = 6, F = 6.

²⁴⁸ I am grateful to Dr Shelagh Vainker of the Ashmolean Museum for her advice about the dating and provenance of these wares.

²⁴⁹ For the mineral composition of the ceramic fabrics of celadons and porcelains, see Henderson (2000), pp. 164–66.

covered with a thick, blue-green glaze. This glaze colour is generally associated with Longquan products of the twelfth and thirteenth centuries.²⁵⁰ F.7933 [36.10] and F.7934 [36.8] are shards from a bowl and lid respectively.²⁵¹ Both have a pale blue-green glaze with moulded designs. D.5250 [36.12] also has a moulded pattern beneath the glaze. F.7936 [not illustrated] is a shard from an unidentified vessel type. This piece is made from a very hard, relatively coarse fabric that is unevenly coated with blue-green glaze and kiln debris. It may be part of the foot from a large celadon basin. This type of container is known to have been used in the Fatimid court in Egypt.²⁵² The second group of celadon wares are covered with a thick, olive-green glaze. This glaze colour is most common during the Yuan period, although the production of these wares continued from the Longquan kilns until as late as the early sixteenth century.²⁵³ The bowls in this group can be split into those with straight rims (F.7931 [36.5])²⁵⁴ and flange rims (D.5248 [36.7], D.5249 [36.6]).²⁵⁵ The fluted decoration of A.4541 [36.9] is a relatively common feature on celadon bowls.²⁵⁶

The single piece of *qingbai* ware (A.4526 [36.13]) has delicate incised decoration and a greyish-blue, transparent glaze. These features are consistent with an identification with the Southern Sung period kilns at Guangdong, Jingdezhen and Guangxi.²⁵⁷ A piece with very similar decoration was recovered from an Sung tomb near Nanchang, dated 1201,²⁵⁸ although other archaeological evidence can be used to support a date in the later thirteenth or early fourteenth century for the Karak shard.²⁵⁹ A.4540 [36.14] is a shard from a small *shufu* ware

²⁵⁰ Valenstein (1989), pp. 101–102.

²⁵¹ For the lid, cf. Valenstein (1989), fig. 99.

²⁵² In a description of the sale of the effects of the Fatimid treasury, Maqṛīzī describes a Chinese basin described as *matārīd al-ṣīnī*. See Maqṛīzī (1853–55), I, p. 415.

²⁵³ Valenstein (1989), p. 137.

²⁵⁴ Cf. bowls from: Sinan shipwreck (Anon. [1985], pl. 54 no. 78); and Topkapi (Krahl [1986], I, p. 216 no. 18 [TKS 15/237]).

²⁵⁵ Cf. bowl excavated on the Pescadores islands (Chen Hsin-hsiung [1985], pl. 20).

²⁵⁶ Comparable examples are reported from: Ḥamā (Riis and Poulsen [1957], nos. 358, 359); Julfār (Hansman [1985], pl. 1.a, b); Pescadores islands (Chen Hsin-hsiung [1985], pls. 9, 11); Sinan shipwreck (Anon. [1985], pl. 56, no. 81; 57, no. 82); and Topkapi Museum (Krahl [1986], I, pls. 174–76 [TKS 15/313, 15/245, 15/330]).

²⁵⁷ Hughes-Stanton and Kerr [1980], nos. 194, 227, 228, 231, 240, 241; Scott (1995), pp. 189–93.

²⁵⁸ Baiquan (1993), pl. 11.

²⁵⁹ See: Philippines (Dupoizet [1995], fig. 2); and Sinan shipwreck (Anon. [1985], pl. 63 no. 90). In the Middle East: Fuṣṭāṭ (Gyllensvard [1975], pl. 3.3, 5, 6); Ḥamā

bowl. The pale grey, porcellaneous fabric is covered with an off-white, opaque glaze. An elegant design containing a dragon and clouds has been moulded in shallow relief on the interior. Bowls of this type were produced during the Yuan period in the kilns of Jingdezhen, and other manufacturing sites. Comparable bowls have appeared in the Sinan shipwreck (which sank in *c.* 1323) and the Philippines.²⁶⁰ A date in the first quarter of the fourteenth century seems likely for the Karak *shufu* bowl.

Three shards in the Karak assemblage have blue designs painted under a clear glaze (A.4520 [36.17], A.4522 [36.15] and A.4524 [36.16]). The shape and painting style of the Karak bowls is typical of Ming wares of the sixteenth century,²⁶¹ although some comparisons can be identified with blue and white wares of the early fifteenth century.²⁶² While blue and white porcelain is rare in excavations and field surveys in the Levant about 800 examples of these imported wares have been located in the Damascus region, particularly in the suburb of Dūma. Of this group, fourteen can be dated to the late fourteenth century, three to the early fifteenth century, and most of the remainder to the second half of the the fifteenth and early sixteenth century. Interestingly, this third group contains a large number of relatively crude examples, many of which imitate late fourteenth-century types.²⁶³ It seems likely that the Karak blue and white shards all come from this third phase in the late fifteenth or early sixteenth century. Two examples of modern hard-paste porcelain of European manufacture were located in the assemblage of area A (A.4521 [36.18], A.4523 [36.19]).

Imported Chinese pottery is found in low numbers in Karak, and is rare all over the Levant in Middle Islamic contexts (fig. 21).²⁶⁴ Three

(Riis and Poulsen [1957], no. 362); Julfār (Hansman [1985], pl. II.b, c); and Quşayr Qadīm (Whitcomb and Johnson [1979], pl. 51.q).

²⁶⁰ Anon. (1985), pp. 320–21 no. II-431; Addis (1968b), figs. 1, 5, 6; Addis (1969), pl/ 35.a–c.

²⁶¹ For the diaper pattern on A.4520, see Luz Afonso (1996), cat. 5, pp. 48–49. The small vase shape represented by A.4524 has also been found on the Philippines (Addis [1968c], pl. 14).

²⁶² Cf. Jenyns (1953), pl. 29.a.

²⁶³ Carswell (1972), pp. 22–23.

²⁶⁴ Examples are reported from Aleppo (Gonnella [2006], p. 171, fig. 6), Alexandria Kawm al-Dikka (Lane [1949], pp. 145–46; Lipinska and Riad [1966], p. 107), Antioch (Waagé [1948], pp. 104–106; pls. 93, 94), 'Asqalān (Frierman [1969]), Aydhāb (Hobson [1926–27], pl. 5.2; Paul [1955], p. 63), Burj al-Aḥmar survey region (Pringle [1986], 3, 4, 16, 17, 26, 32), Cairo (Gayraud [1986], p. 47), Damascus, Bāb Sarīja (Toucir [1973], pl. IVa), Damascus, Dūma region (Carswell [1972]), Fuṣṭāṭ (Scanlon [1984],

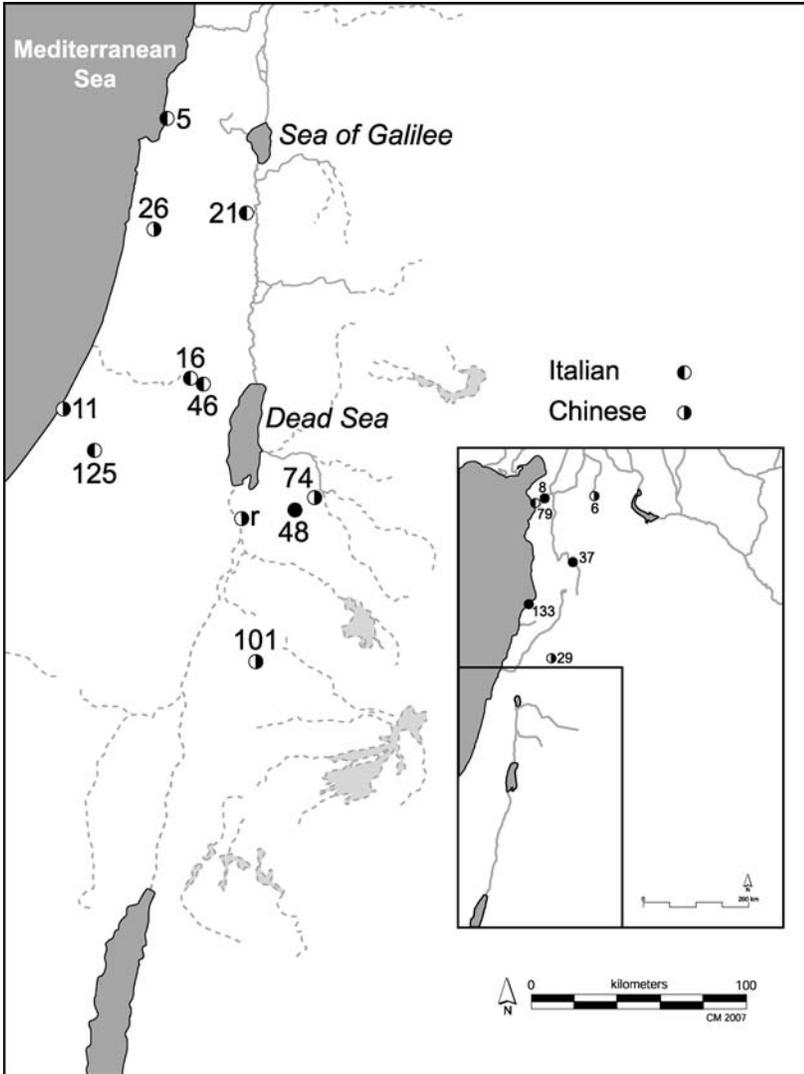


Figure 21. Distribution in Bilād al-Shām of Italian and Chinese glazed wares (late thirteenth to early sixteenth century).

phases of imported Chinese pottery can be located in the Karak assemblage. The first, represented by the *qingbai* ware shard and the pieces of blue-green glazed celadon may be dated to the latter part of the thirteenth century.²⁶⁵ The second phase, represented by the olive-green glazed celadons and the *shufu* ware can probably be placed in the last quarter of the thirteenth and the fourteenth century. It may be assumed that these celadon pieces predate the large-scale introduction of blue and white porcelain into the Levant in the last quarter of the fourteenth century, although it should be noted that Longquan continued to produce these wares until the beginning of the sixteenth century. The last group of Chinese imports are the blue and white porcelain shards which probably date to the early sixteenth century.

The scarcity of celadon and porcelain in the region is the result of both low availability and high unit cost. Written sources of the Middle Islamic period make clear that the stone-like ceramic bodies and smooth, glassy glazes were greatly prized.²⁶⁶ The low numbers of Chinese imports recovered from Karak should not be taken to mean that the occupants of the castle were not major consumers of luxury products; the mere presence of these wares is an indicator of high levels of economic activity. F.7936 may be part of a large footed basin. Sources of the Mamluk period only mention larger Chinese ceramic vessels in descriptions of the state treasury,²⁶⁷ and it is worth noting that the contents of the treasury were moved to Karak during the reign of sultan al-Nāṣir Aḥmad (r. 1341–42).²⁶⁸ Such items would have been very expensive and an association with royal patronage is probable.

It is important to recognise that establishing the approximate date of manufacture is not necessarily a good indication of their date of deposition within archaeological contexts. Of course, this is an issue relevant to the analysis of all excavated artefacts, but it is of particular importance to luxury items such as imported celadons and porcelains.

pls. 2, 5, 5: Gyllensvard [1975]), Hamā (Riis and Poulsen [1957], figs. 353–66), Hārim (Gelichi [2006], p. 197), Lajjūn (Brown, forthcoming), Qūṣ (Garcin [1976], pl. XIX), Quṣayr Qadīm (Whitcomb and Johnson [1979], pl. 51), Shawbak (Brown [1988], fig. 12.33), Southern Ghawr, Rujūm (MacDonald [1992], pl. 35.1), Tripoli (Salamé-Sarkis [1980], fig. 40.7, 8, pl. LXX.5, 6), and Tūd (Joel [1992], p. 15, section X).

²⁶⁵ The evidence of the comparable pieces in the Nanchang tomb (dated 1201) may suggest an earlier dating for the Karak *qingbai* ware shard.

²⁶⁶ See sources collected in Kahle (1956); Milwright (1999), pp. 514–18.

²⁶⁷ For instance, the Chinese ceramics in the *bayt al-sharāb* of the Ayyubid sultans in Cairo are discussed by Qalqashandī ([1913–18], iv, p. 10).

²⁶⁸ See chapter 2 for a discussion of these events.

The evidence from the Dūma district of Damascus shows that blue and white porcelain might be handed down through the generations as an heirloom. The fact that in the 1960s householders from this district possessed bowls and vases of fourteenth- and fifteenth-century date is reason enough for caution in the use of Chinese pottery to provide *terminus ante quem* for any group of excavated ceramics.²⁶⁹ Accounts of the royal treasury in Cairo written by Mamluk authors make clear that some items were valued because of their age (perhaps coming from the treasury of the Fatimid caliphs),²⁷⁰ and the collection of porcelain and celadon amassed by the Ottoman sultans includes numerous items amassed during their military conquests in Egypt, Syria and Iran.²⁷¹

²⁶⁹ An intriguing example of the long lives of Chinese pottery in the Middle East is provided by John Carswell ([1970], pl. 11: c). He illustrates a fourteenth-century blue and white porcelain platter embedded in an inscription panel dated 1224/1809–10 in a mosque in Hims.

²⁷⁰ Milwright (1999), p. 514.

²⁷¹ See Raby and Yücel in Krahl (1986), 1, pp. 21–33; Milwright (1999), p. 515, n. 96, 97.

CHAPTER EIGHT

SUMMARY OF THE CERAMIC EVIDENCE

This short chapter presents a summary of the findings in chapters 6 and 7. Two main issues are addressed: first, the identification of the major distribution patterns for pottery wares in the Karak assemblage; and second, the isolation of phases in the history of the site where there exist peaks in the consumption of imported glazed and unglazed ceramics. In other words, the chapter locates the larger patterns of spatial and chronological distribution that may be correlated with data gathered in the historical analysis (chapters 2–4), and summarised in chapter 5.

A few preliminary comments should be made about the characteristics of the ceramics from Karak. The shard assemblages from areas A–F can be divided into seven broad categories.¹ The statistical breakdown of the Karak assemblages according to these categories is as follows (see tables 1 and 2 in appendix 1): handmade = 6%; unglazed wheelthrown = 60%; relief-moulded unglazed = >1%; lead-glazed = 23%; alkaline-glazed = 11%; and Chinese imports = >1% (all percentages given in this chapter are rounded to the nearest integer). Clearly, shard counting alone should not be taken as an exact calculation for numbers of original vessels in each group, but these data are useful in providing a general profile of the assemblage.² The same basic profile outlined above is to be found in the breakdown of ceramic groups in the dump sites, areas A and F. The field survey areas around the town and castle reveal some variations in this general pattern. Handmade undecorated wares are rare in areas B–E but, unlike areas A and F, plain lead-glazed wares outnumber the unglazed wheelthrown wares. The lower densities of unglazed wheelthrown wares may be because unglazed body shards were not always collected as diagnostic Middle Islamic pottery on the Miller survey. Of the survey areas, area D (the east slope of Karak castle) contains the largest concentration of glazed

¹ The small numbers of diagnostic Roman-Byzantine wares and modern glazed pottery are ignored in the following discussion.

² On different methods of vessel estimation from shard assemblages, see Rice (1987), pp. 290–93.

pottery, including both decorated wares (lead-glazed and alkaline-glazed) and Chinese celadon (green ware) shards. Area E (the south slope of the castle) reports the largest concentration of handmade types and the lowest percentage of glazed wares found in the survey areas.

The profiles from areas A–F can also be compared with the excavation of the ‘reception hall’ in Karak (table 3 in appendix 1).³ The ceramics from this site comprised: handmade = 16%; wheelthrown unglazed = 76%; glazed = 6%; and imported glazed = 2%. Isolating the ceramics from phase I, the phase associated with the Mamluk period, provides lower percentages for handmade wares and marginally higher ones for the glazed wares: handmade = 5%; wheelthrown unglazed = 86%; glazed = 6%; imported glazed = 3%. While the categories employed in Brown’s reports are different to those used in this study, it is interesting to note the similarities and divergences between the finds from the ‘reception hall’ and areas A–F. While unglazed wheelthrown wares are dominant in both, and the percentages of handmade wares in the excavation phase I are very close to those of areas A–F, the excavation recovered significantly lower numbers of glazed wares (9% in phase I and 8% of the total assemblage). The surprisingly low quantities of imported glazed ware should not, however, be seen as an indication that the occupants of this area in the fourteenth century were not from the Mamluk elite. In addition to the ceramics, the excavation also recovered artefacts in other media including fragments of marble flagstones and wall-facings, moulded and painted plaster, carved steatite and limestone, iron and copper artefacts, and numerous shards from blown and moulded glass vessels.⁴

If we move to a comparison between finds from the castle and those collected in other settlements of the Karak plateau it is possible to see clear areas of difference, but also some important continuities. While handmade wares are present in low numbers in Karak areas A and F (and in somewhat greater numbers in areas B–E and the ‘reception hall’), these wares are the dominant ceramic in the rural settlements on the plateau. This disparity evidently reflects the presence of elite groups in the castle, but it is important to avoid making simplistic generalisations. The excavations at Khirbat Fāris have found higher

³ The following information is taken from Brown (1989 and unpublished).

⁴ Details given in Brown (unpublished), appendix II: inventories. The metal finds included on copper *fals*, that has been dated to the fourteenth century. Glass and carved plaster were also located in area A.

levels of unglazed wheelthrown shards than are normally reported on field surveys on the Karak plateau, and the excavation of a cistern on the site revealed a variety of glazed wares as well as fragments of a marvered glass vessel. In fact, the inter-regional and international distribution wares identified in the Karak assemblages—with the exception of sphero-conical vessels, polychrome stonepaste, Italian sgraffito, and Chinese imports—are all reported on the settlements of the plateau. The difference, of course, is one of scale with glazed pottery always being a rarity on any given site. Nevertheless, it is clear that villages, at least until the late fourteenth century, did enjoy some access to imported glazed pottery which they either obtained in Karak or from travelling merchants passing along the King's Highway or one of the smaller trade routes into Palestine. The ceramic evidence also suggests the existence of two other secondary market centres on the Karak plateau, Mu'ta and Rabba.⁵

The distribution analysis in chapters 6 and 7 may be used to look at Karak in the context of the different levels of trade network operating in Bilād al-Shām and the eastern Mediterranean during the Middle Islamic period. The distribution patterns for wares in the Karak assemblage are complex but, for clarity, can be divided into three main categories: local, inter-regional, and international distribution. The term local distribution is used here to refer to ceramics manufactured on the plateau or south of Karak and consumed exclusively within those regions. Inter-regional distribution patterns are those relating to ceramics produced in Palestine or Jordan and traded primarily in the south of Bilād al-Shām (including Damascus). International distribution patterns involve ceramics imported into the Middle East, or ceramics produced in Syria or Egypt and traded in Bilād al-Shām and around the Mediterranean basin. In the following paragraphs I will identify and discuss the significant ceramic wares within these three categories of distribution.

Local distribution ceramics in the Karak assemblage include examples of handmade, unglazed wheelthrown, and plain lead-glazed wares. The available comparanda would indicate that the handmade undecorated wares at Karak were manufactured mainly in the regions south of Karak and in the Southern Ghawr. Most handmade undecorated pottery was probably manufactured and circulated via spatially restricted

⁵ Brown (1992), pp. 425–28, map 29. See also Brown (2000).

non-commercial exchange networks, though it was noted that some examples—particularly the calcite tempered vessels that probably functioned as cooking wares—may have been traded over greater distances. The presence of an unfired shard from a handmade undecorated shard in area A confirms production of this type of pottery in the vicinity of Karak. The Miller survey found higher concentrations of handmade undecorated wares on the settlements on the southern part of the plateau, though whether this indicates that undecorated wares were produced predominantly in these areas is unclear.⁶ While the majority of handmade geometric-painted ware and the handmade wares with simple slip-painting in Karak are assumed to be produced locally, some specialised types (including those with little or no organic temper and the examples that may have been kiln-fired) could have enjoyed somewhat wider distribution patterns within Jordan and Palestine. At present, the limited petrographic analysis of handmade wares make this last point difficult to test.⁷

The presence in the Karak assemblages of an unfired neck from a jar and a kiln waster from the base of an *ibriq* confirm some level of unglazed wheelthrown ware production in or near the town, though no kilns have yet been identified. It seems reasonable to assume that the inhabitants of the plateau were largely self-sufficient in most types of functional unglazed wheelthrown vessels (bearing in mind that most villagers seem to have favoured handmade wares in any case). While specialised items such as large storage vessels and basins may also have been produced locally, importation from Palestine or reliance upon itinerant potters coming into Jordan from Palestine should not be discounted. The archaeological comparanda indicate that not all unglazed wheelthrown ware was locally manufactured, however, and inter-regional distribution patterns can be identified for some decorated and specialised types. The presence of small numbers reduction-fired grey wares in the Karak assemblage may suggest a link to the industries in Gaza and elsewhere on the Palestine coast (though it should be noted that the Karak examples do not look like the Gaza wares of the nineteenth and twentieth centuries).⁸

⁶ Brown (1992), pp. 431–39.

⁷ See, however, Mason and Milwright (1998); Abu Jaber and Saa'd (2000).

⁸ On Gaza wares, see references in Milwright (2000), p. 196; Walker (2005), pp. 83–84.

Plain lead-glazed ware bowls and closed vessels were found in large numbers at Karak, and it is clear from the diversity of vessel types, ceramic fabrics and glazes that they were made in a variety of locations. This group comprises both local and inter-regional distribution wares. To judge by the waster and kiln tripod found in the Karak assemblages, some of the self-slipped/unslipped plain lead-glazed ware were produced in the vicinity of the castle. Kilns for lead-glazed ware have been located in the Southern Ghawr and other evidence suggesting manufacture (kiln tripods) appears at Shawbak and Khirbat Fāris.⁹ Local distribution patterns can be assumed for plain lead-glazed ware made on the plateau. Kilns in the Southern Ghawr probably served the prosperous local communities like Rujūm and Fayfā' in addition to the Karak plateau and the Khalīl (Hebron) region. High-quality slipped plain glazed wares (some of which have significant similarities of ceramic fabric, rim shape and glaze to relief-moulded lead-glazed wares) were manufactured in Palestine and form part of the inter-regional distribution networks.

With some rare exceptions, the handmade, wheelthrown unglazed and plain lead-glazed ceramics produced on the plateau and the regions south of the Wādī al-Ḥasā are local distribution wares. Inter-regional distribution ceramics were produced in the Ghawr, Balqā', and Palestine and were circulated primarily in the south of Bilād al-Shām (including the south of Syria as far as Damascus), and in some cases along the Syrian littoral. Most of the inter-regional distribution ceramics are glazed wares, but some unglazed types can be highlighted. The most important of these are the sugar pots and syrup jars associated with the manufacture of sugar and molasses in the Jordan valley and Dead Sea Ghawr. These vessels were probably manufactured on or near the sugar mills themselves, though petrographic evidence suggests that mills may have been supplied with ceramics by more than one kiln.¹⁰ It seems likely that most of the vessels in the assemblages came from sugar mills in the Dead Sea region because of its greater proximity to Karak. The available petrographic analysis supports this assertion, and it would also fit with the historical evidence (the sugar mills of the Jordan valley appear to have been under the administration of Damascus through

⁹ On the kilns of the southern Ghawr, see Whitcomb (1992); King *et al.* (1987); King (1989). Kiln tripods have been located in Shawbak (Mason and Milwright [1998]) and Khirbat Fāris (1994 season).

¹⁰ See analysis of sugar pots in Mason and Milwright (1998).

much of the Middle Islamic period).¹¹ Although the sugar of ‘Cranco di Monreale’ (i.e. the Dead Sea Ghawr and perhaps also the valleys around Shawbak) was certainly being traded in the Mediterranean in the fourteenth century,¹² it is not clear the extent to which the vessels themselves—sugar pots and syrup jars—were being circulated away from their source. While it seems likely that sugar pots, at least, were designed to be reused on site, the large numbers in Karak do show that sugar was sometimes traded in ceramic containers. The archaeological record provides evidence for the movement of sugar pots and syrup jars to regions of Palestine and Jordan (fig. 11).

Comparanda for examples of decorated unglazed wheelthrown ware and relief moulded unglazed ware were identified from excavations and surveys elsewhere in southern Bilād al-Shām. The production centres for the decorated wheelthrown wares have not been located (though towns in Palestine seem the likely source for much of the material in Karak). It is worth noting that the human and zoomorphic motifs that are relatively common in the relief-moulded pottery of northern and central Syria (including Damascus) are very rare in the south of Bilād al-Shām. The finds in Jordan and Palestine tend to be ornamented with repeated abstracted designs and pseudo-epigraphy. This north-south distinction suggests that the tastes of consumers in the south of Bilād al-Shām were catered for by manufacturers in the region. Evidence for the production of both canteens and slipper lamps has been found in Jerusalem, though other workshops probably existed elsewhere. The workshops of Damascus may have manufactured objects for circulation in Palestine and Jordan. Another possibility, for slipper lamps at least, is that itinerant potters travelled with the moulds and manufactured vessels in a variety of locations.¹³

Inter-regional distribution patterns were identified for many lead-glazed wares. The finer slipped plain lead-glazed ceramics appear to be technically related to relief moulded lead-glazed wares, and both may have been manufactured in Jerusalem. Slip-painted wares, relief-moulded wares, and widely-incised sgraffito were all traded primarily in the south of Bilād al-Shām, though small numbers are reported in the south of Syria as far as Damascus and ports on the Syrian littoral

¹¹ See chapter 4.

¹² Pegolotti (1936), p. 363.

¹³ The archaeological evidence for manufacturing centres is presented in chapter 6.

such as Beirut and Tripoli. These inter-regional distribution lead-glazed wares do not appear in any significant numbers in Egypt, or central and northern Syria. Importantly, the lead-glazed wares at Karak do not correspond to either the decorated lead-glazed wares of northern Syria or the glazed pottery associated with Frankish occupation phases on the coast of Palestine. Only one sgraffito bowl from area A could be associated with any confidence with the Crusader sites on the Palestinian coast. It is also striking that no examples of 'barracks ware', the ubiquitous sgraffito ware of Mamluk Cairo and Alexandria have ever been recovered from Karak. In other words, the archaeological evidence leads to the conclusion that there were numerous centres in Egypt and Bilād al-Shām producing distinct decorated lead-glazed wares but that, with some exceptions, these different groups enjoyed relatively restricted distribution patterns. There appear to have been workshops in Palestine and Balqā' manufacturing decorated lead-glazed wares that were traded in Muslim-controlled areas in the south of Bilād al-Shām (including Damascus).¹⁴

International distribution ceramics can be divided into those manufactured in Syria and Egypt and those imported into Bilād al-Shām. Imported celadon, *qingbai* ware, *shufu* ware, and blue and white porcelain appear in low numbers in excavations all over the Middle East. The startling discovery in the town of Dūma near Damascus of hundreds of Chinese vessels dating between the late fourteenth and the end of fifteenth century does indicate, however, that much larger numbers of Chinese ceramics were circulating in Bilād al-Shām than is perhaps suggested by the archaeological record.¹⁵ These expensive items are usually associated with sites of economic or political importance—cities, ports, caravanserais, and major military installations. For instance, in central and southern Jordan Chinese imports have been located at Karak and Lajjūn (a stop on the *hajj* route), while the ongoing excavations at the local governor's residence in Ḥasbān may turn up further examples.¹⁶ Chinese ceramics were imported into Bilād al-Shām and Egypt via the Red Sea at Qūṣayr Qadīm, 'Aydhāb, Ṭūr (in the southern Sinai),

¹⁴ It is significant in this context that wares such as relief-moulded lead-glazed and widely-incised sgraffito are very seldom found in excavations of Frankish occupation levels. For a detailed survey of this question, see Milwright (2003).

¹⁵ Carswell (1972, 2004).

¹⁶ For reports of the recent excavations, see Walker (2001); Walker and LaBianca (2003).

or the ports of the Ḥijāz. Some pieces may possibly have arrived via land routes from the Persian Gulf. Damascus was the largest market for Chinese ceramics in Middle Islamic Bilād al-Shām,¹⁷ though it is unclear whether the Far Eastern imported wares found in Karak came to the site via the Syrian capital or were bought more directly through merchants passing along the King's Highway. Some of the Chinese ware in Karak may also have been left there when sultans and other high officials from Cairo made visits to southern Jordan.

Some other imported wares were also identified in the Karak assemblages. This included three examples of Italian sgraffito dating from the last quarter of the fifteenth through to the second half of the sixteenth century. Manufactured in towns such as Venice, Verona and Ferrara, these attractive sgraffito bowls are found in small numbers all over Bilād al-Shām, and some examples are also known from Egypt.¹⁸ Like other Italian imports of this period—maiolica, marbled ware, and so on—the greatest concentration of finds has been in Palestine, and particularly near sites associated with Christian pilgrimage. In this context, the presence of Italian imports in the relatively remote location of Karak is noteworthy. The somewhat sporadic nature of the finds in the archaeological record suggests that Italian ceramics were not traded in bulk in the Middle East at this time, and one can only speculate as to the means by which these luxury items found their way into Jordan (perhaps through links between Karaki Christians and Christians in Palestine). Other imports include the few early tobacco pipes (probably imported from either Turkey or Greece) and the possible example of a coffee cup from Kütahya. There is growing evidence in the archaeological record for the export of decorated stonepaste pottery from Kütahya to Bilād al-Shām, but the bulk of this activity occurs in the later seventeenth century onward, a period when Karak was no longer well connected to wider trading networks in the Middle East.¹⁹

¹⁷ For references to the sale of Chinese pottery in Damascus, and elsewhere in Syria, see Carswell (1979); Milwright (1999), pp. 513–16. The paucity of excavations in Aleppo means that we have little picture of what was likely an active trade in celadons and porcelains. For the recovery of Chinese wares in the recent excavations of the citadel, see Gonnella (2006), p. 171, fig. 6.

¹⁸ See discussion in Pringle (1984b).

¹⁹ For references to Turkish imports in Bilād al-Shām, see Milwright (2000), p. 198. Other examples have been recovered in recent years during excavations in the Damascus citadel and in Palestine. For Damascus, see François (2001–2002).

Karak is one of the few sites in Jordan where sphero-conical vessels have been located. The examples from the castle correspond to Savage-Smith's type 5. Type 5 vessels have been found as far east as Nishapur in Iran, though there is a significant concentration of excavated finds in Bilād al-Shām and Egypt. While the source of the Karak vessels is unknown, petrographic analysis of one example suggested a Palestinian or Jordanian provenance.²⁰ The remainder of the international distribution wares are alkaline-glazed stoneware and, with very few exceptions, these are of Syrian origin. The Karak assemblages contained no examples of 'Tal Minis', 'Laqabi' ware, Raqqa-style lustre, or other characteristic north Syrian wares of the late eleventh to the early thirteenth century. In general, it is difficult to detect much evidence for the transport of decorated stoneware from the production centres of the Euphrates valley to southern Bilād al-Shām. Correlations were found between finds from Raqqa, Ruṣāfa, and elsewhere with some of the monochrome turquoise glaze, polychrome, black and white, and black under turquoise wares from Karak, but recent work by Robert Mason indicates that Damascus was also producing equivalent stoneware wares in this period.²¹ In the period after *c.* 1250, Damascus seems to have become the dominant producer of glazed stoneware wares in Syria (perhaps with some other workshops operating in Aleppo and in the vicinity of Ḥamā), and certainly it seems probable that most of the Karak pieces dating from the mid thirteenth century onward were made in the Syrian capital.²² One shard from a black and white ware bowl of the mid twelfth century may be assigned an Egyptian provenance on the basis of its similarity to contemporary Fatimid lustre, and some of the imitation celadon wares may be compared with pieces excavated in Fustāṭ, but otherwise there is little firm evidence for the movement of Egyptian glazed pottery to Karak.

While the vast majority of the glazed stoneware wares in the Karak assemblages can be assigned a Damascene provenance, there are interesting variations in the distribution patterns for different wares. The two most widespread and ubiquitous wares are black under turquoise and

²⁰ Mason and Milwright (1998).

²¹ Mason (1997); and (2004), pp. 91–120. Note that the late twelfth- and early thirteenth-century stoneware from the Armenian Garden in Jerusalem submitted for petrographic analysis all possessed the characteristic Damascus 'petrofabric'.

²² There have been reports of the discovery of a stoneware workshop in an excavation near Jerusalem, though I have not yet seen any published evidence.

blue and black wares. Both were produced for a relatively long period of time, and were also traded in the eastern Mediterranean. Bowls of these types are even found on rural sites on the Karak plateau. Blue and white stoneware is the most numerous of the stoneware wares at Karak, but is much rarer in the archaeological record in Bilād al-Shām, occurring mainly on urban sites in Palestine and Syria, as well as ports on the coast of Lebanon. Blue and white is virtually absent on rural sites (only one piece was found outside Karak during the Miller survey of the plateau), perhaps a reflection of the changing economic climate of the late fourteenth and early fifteenth century. Stoneware wares decorated with underglaze black and turquoise (but no cobalt blue) are well represented in Karak, and appear also in excavations in Palestine, the Jordan valley and Balqā'. Though there are some reports from Syria, the bulk of the finds are in the south of Bilād al-Shām, with additional reports from Cyprus and Italy. One possibility is that the simplified painting style and absence of zoomorphic motifs were designed to account for tastes of consumers in the south of Bilād al-Shām (a tendency toward aniconic decoration has been noted in the decorated lead-glazed wares of the thirteenth and fourteenth century in this region).²³

The use of comparative data from excavated contexts in Bilād al-Shām and elsewhere has provided chronological parameters for individual wares and vessel types in the assemblage. The precision of the proposed dating varies, but the evidence gives some indication of the fluctuations in ceramic consumption in Karak during the Middle Islamic period. A few wares can be tentatively associated with the mid twelfth- to early thirteenth-century occupation phase in Karak. This group comprises some of the plain lead-glazed, sgraffito, and the simply painted handmade wares. Recent studies of Syrian glazed stoneware of this period allow some examples from Karak to be dated with greater certainty. The period from *c.* 1150–1200 includes polychrome style 1 and some of the black and white and black under turquoise wares. Some of these types continue into the early thirteenth century, and this later phase also includes the lustre-painted shards and the earliest blue and black pieces. The *qingbai* ware shard is probably to be dated *c.* 1200–25. Some handmade unpainted and handmade geometrically-painted ware may date from the early thirteenth century, though these

²³ Milwright (2003).

wares are also reported in excavated contexts of the fourteenth and fifteenth centuries.

The largest group of international distribution pottery can be associated with the phase, *c.* 1250–1350. This phase includes the *shufu* ware bowl, the celadon, as well as most of the blue and black stonepaste. A larger number of lead-glazed, alkaline-glazed, relief-moulded unglazed, and specialised unglazed wheelthrown wares is dated more broadly to the late thirteenth or fourteenth centuries. Some wares such as sugar vessels, large storage jars, large basins, and plain lead-glazed wares probably continue into the fifteenth century. A concentration of decorated glazed ware is reported in the late fourteenth and early fifteenth century with the introduction of blue and white alkaline-glazed wares. Turquoise and black ware and some blue and black shards also appear to be associated with the second half of the fourteenth century.

Blue and white stonepaste, plain lead-glazed earthenware, unglazed wheelthrown, and handmade wares probably continue through the fifteenth century. A small concentration of luxury wares is reported in the late fifteenth or early sixteenth century. This phase includes Ming period blue and white porcelain and Italian sgraffito. Style 4 polychrome probably also dates to the latter part of the fifteenth century. The group of tobacco pipes and perhaps the reduction-fired grey wares from the Karak assemblage can be dated to the seventeenth and eighteenth centuries. The unpainted handmade wares found on the settlements of the southern Karak plateau have been tentatively dated by Brown to the period after *c.* 1500, though it is not clear how closely these may be correlated with the unpainted handmade wares at Karak.²⁴

Seen in the context of the distribution patterns this picture of consumption in the Middle Islamic period becomes easier to interpret. International distribution wares are grouped into four main phases, *c.* 1175–1225, *c.* 1250–1350, *c.* 1375–1425, and *c.* 1475–1525. The first phase consists of a small number of stonepaste wares (including the two lustre pieces) and the single piece of *qingbai* ware. The second, and most significant phase is characterised by the presence of the largest number of imported Chinese pottery and a wide range of decorated alkaline-glazed pottery from widely dispersed sites in the Levant. The third phase contains blue and white, and turquoise and black wares but

²⁴ On the sixteenth-century ceramics of the south of the plateau, see Brown (1992), chapter 11.

no imports. Other alkaline-glazed wares, decorated lead-glazed, relief-moulded unglazed, sugar vessels, and specialised unglazed wheelthrown wares datable to the fourteenth century suggest a broad continuity of consumption between the two phases. The fourth phase contains small numbers of both imported Italian and Chinese pottery. Polychrome style 4 may also date from this period. The earlier part of the fifteenth century is probably represented by blue and white stonepaste, plain lead-glazed, sugar wares, and some specialised unglazed wheelthrown wares, though in much reduced quantities compared to the fourteenth century. The use of local distribution wares such as handmade (painted and unpainted), unglazed wheelthrown, and self-slipped (or unslipped) plain glazed probably remains broadly consistent from the thirteenth to the fifteenth century.

CHAPTER NINE

CONCLUSION

My son, if the nobles of Aleppo (*al-zumūk al-ḥalabiyīn*) try to make you hand over Karak to al-Nāṣir [i.e. al-Nāṣir Yūsuf], give him [instead] Shawbak. And if he is not satisfied with that, increase it [to include] al-Sāḥil for his satisfaction. But do not allow Karak to leave your hand. By God, heed my recommendation because you do not know the plans of your accursed enemy (*al-‘adū ‘l-makhdhūl*). Perhaps—God forbid it—if he advances to Egypt, Karak will be your refuge (*zuhr*), and it will protect your person (literally: head, *rā’s*) and your *ḥarīm*. Egypt does not possess such a fortress (*ḥiṣn*), and gathered there you have an army with which you can advance against the enemy and retake Egypt. But if you do not have a refuge like Karak your soldiers will disperse from you. I have decided to transport there money, supplies, the *ḥarīm*, and everything that is precious to me. And I will make it my refuge and will be strengthened by it. By God, my heart was not strong and my back not firm until I had it [Karak] in my possession. Praise be to God alone, and blessing and peace to His Prophet Muḥammad and on his family and his companions.¹

Contained within a manuscript of al-Nuwayrī’s (d. 1332), *Nihāyat al-arab fī funūn al-adab*, this passage is part of a remarkable letter believed to have been written by the Ayyubid sultan of Egypt, al-Ṣāliḥ Najm al-Dīn Ayyūb to his son, al-Mu‘azzam Tūrānshāh. Composed shortly before his death in 1249 and the accession of Tūrānshāh, there can be no doubting the importance the letter places on retaining possession of the castle of Karak in the turbulent world of Ayyubid politics. Indeed, the author of the letter had plenty of reason to respect the strength of Karak’s fortifications having been held there as a prisoner by al-Nāṣir Dāwūd for seven months in 1239–40. It cost al-Ṣāliḥ Ayyūb considerable effort to gain control of this key castle, besieging it in 1246, later attempting negotiation with al-Nāṣir Dāwūd, and finally concluding an agreement with the latter’s sons in 1249. It is worth noting the extent of the territorial concessions that al-Ṣāliḥ Ayyūb recommends as a means

¹ Cahen and Chabbouh (1977), pp. 104 (Arabic), 114 (French translation). The translators suggest that the ‘accursed enemy’ should be identified as Louis IX (see p. 114 n. 61).

to hold onto Karak: both the southern Jordanian castle of Shawbak, a favoured haunt of al-Mu‘azzam ‘Īsā a few decades earlier, and al-Şāhil (i.e. the Syrian littoral). Such significant potential concessions indicate that it was not the economic aspects of the territory controlled by Karak—though the plateau certainly contained fertile lands for the cultivation of wheat and the raising of livestock—that were uppermost in al-Şālih Ayyūb’s mind. Rather, it was a keen awareness of the strategic qualities of the castle that made it such a precious possession to the sultans of Egypt. Karak was located near to important trade and pilgrimage routes, it was the place where the sultans could gather bedouin as auxiliary troops for military campaigns, and, time and again, it had proved its ability to withstand prolonged sieges. Presumably, it was similar considerations that led to the refusal of sultan al-Kāmil to relinquish the Jordanian castles during the negotiations over the port of Damietta in 1218–19.

During his short and luckless reign al-Mu‘azzam Tūrānshāh seems to have had neither the opportunity nor the inclination to put his father’s advice into practice; his assassination by his own mamluk guard in Cairo in 1250 never gave him the chance to enjoy the safety provided by Karak. For numerous other sultans and amirs in the Ayyubid and Mamluk periods, however, the Jordanian castle played a key role as either a refuge from the factional politics of Cairo and Damascus or as a place of temporary exile. Its defensive strength also led to the castle functioning on several occasions as a state treasury, an arsenal, and a prison (see chapters 2 and 3). This general consideration of the strategic role of Karak prompts questions that may be examined using the textual and archaeological data collected in this book. First, how did the evident high regard for the castle of Karak among both Muslim and Frankish elites translate into investment in the infrastructure of the region. This question of state policy and patronage can encompass investment in military installations, religious institutions, the transport infrastructure and development of agriculture, as well as spending directed at specific groups of inhabitants, such as the bedouin of southern Jordan. Second, how did the elite population living in the town and castle fluctuate from the mid twelfth through to the early seventeenth century, and to what extent did the presence of these elite groups (Frankish nobles, amirs, sultans, state functionaries, officers in the military, and so on) affect the material wealth of Karak and the surrounding area. A corollary of this last point is that the increasing prominence of Karak from the mid twelfth century and the greater wealth of its inhabitants (in the castle

at least) also drew it into wider trading networks that went beyond Jordan and Palestine to include the eastern Mediterranean and, in an indirect manner, economic activity in the Red Sea, the Indian Ocean and Southeast Asia. Bringing it back to a more localised perspective, one may also question the changing economic relations between Karak, the principal market and administrative centre of southern Jordan with its agricultural hinterland, particularly the Karak plateau.

In the conclusion I will assess the extent to which the integration of textual and archaeological sources can help to answer these questions. In the following paragraphs the information is broken down according to the dynastic divisions. The period prior to the construction of the Frankish castle at Karak can be disposed of quickly. The representations of Karak in the mosaic pavements of the church of St George in Mādabā (sixth century) and the church of St Stephen in Umm al-Raṣāṣ (dated 718) indicate that the hill-top town was fortified in the late Byzantine and Early Islamic period, while there is a brief reference of a fortress (*ḥiṣn*) there in 983. Unfortunately, no evidence of these earlier structures has come to light, and the ceramic record is also sparse.² It seems reasonable to assume that Karak operated as an important economic and administrative centre of the plateau (perhaps overtaking Rabbā by the late tenth century), but little more can be said on the basis of the evidence provided in this study.

The historical development of both Karak and the remainder of central and southern Jordan can be traced with much more certainty from the beginning of the twelfth century. This period coincides with the expansion of Crusader authority into Jordan, and the construction of the major castles of Montréal (Shawbak) and Karak, and a series of smaller installations that served to control Balqā' and the regions from the Wādī al-Mūjīb south to the Red Sea. Of these subsidiary forts and watchtowers, Wu'ayra and Ḥabīs (both in the vicinity of Petra) are the best preserved, though a number of others have been conjectured on the basis of literary or archaeological evidence (see chapter 3). This impressive network of military structures formed part of the larger Crusader colonial enterprise, and it is clear that Frankish settlers

² On the Early Islamic ceramics of the Karak plateau, see Brown (1991). The ceramics of southern Jordan during the Abbasid and Fatimid periods are still little known (and difficult to identify in field surveys), though recent excavations are improving our knowledge. For instance, see 'Amr *et al.* (2000); Walmsley *et al.* 1998; Walmsley, Karsgaard and Grey (1999); Walmsley and Grey (2001); Whitcomb (1988a, 1988b, 1990–91).

were brought into Jordan and granted parcels of land. Other land and privileges were allocated to the Latin church and the religious orders. The wider economic and strategic concerns of the Crusaders in central and southern Jordan can be briefly summarised. Aside from colonisation, the occupation of these regions had considerable advantages for the Kingdom of Jerusalem. The plains of Jordan produced a substantial surplus of wheat and other agricultural products that could be transported west into Palestine (some of this was taken by ship over the Dead Sea). Other potential economic incentives were the livestock raised by local bedouin, and the possibility of taxing (or raiding) trade caravans passing along the King's Highway. This last point also had distinct strategic implications, for the foundation of Frankish Oultrejourdain severed lines of communication between Damascus and Cairo, as well as disrupting the land route used on the annual *hajj* from Syria.

That the Crusaders made a lasting impact on the material culture of Jordan through the erection of castles and churches cannot be doubted, but other aspects of the archaeological record are more difficult to interpret. Perhaps the key point is the lack of definably 'Frankish' material in excavated contexts and field surveys in Jordan. Neither the dumps of areas A and F nor the survey areas B–E revealed much that could be identified clearly with Crusader-period sites in Palestine or Syria. Twelfth- and thirteenth-century imports from Italy were also absent at Karak and, to the best of my knowledge, none have been reported anywhere else in central and southern Jordan. Certainly controlled excavation within surviving Frankish structures would help to clarify this issue, but the abiding impression left by the Karak assemblages is that in the period 1142–1188/89 the inhabitants of the castle relied upon locally-produced unglazed and glazed ceramics. The excavation the later phase of Frankish occupation at Wu'ayra resulted in the discovery of Syrian stonepaste wares, probably from Damascus.³ This discovery indicates the degree to which such remote settlements could remain linked into larger trading networks (ones that extended across political boundaries), and has implications for the interpretation of the material from Karak. The earliest group of stonepaste wares at Karak may be dated *c.* 1150–1200, a time period that encompasses the last decades of

³ On these excavations, see Vannini and Vanni Desideri (1995); Vannini and Tonghini (1996). By contrast, the few ceramics gathered from the surface of Ḥabis were all handmade wares. See Hammond (1970).

Frankish rule and the incorporation of Karak into the Ayyubid sultanate. Doubtless, the lords of Oultrejourdain and their courts did enjoy access to luxury goods—metalwork, textiles, glass, and so on—but we lack the evidence to speculate on where such items might have been manufactured. Ongoing research on the faunal remains recovered on excavations of Middle Islamic contexts in Jordan may be able to trace changes in diet—most pertinently the consumption of pork—that could provide another means to trace Frankish, or at least Christian, settlement in the region.⁴

The Ayyubid period presents some difficult problems for the integration of historical and material evidence. While there was a reasonable degree of consistency in the larger policy objectives of the Frankish lords of Oultrejourdain (at least in the sense that they shared the common purpose of maintaining their presence in the region and defending the Kingdom of Jerusalem from attack by Muslim forces), the different Ayyubid sultans who controlled Karak between 1189 and 1263 had to react to the specific circumstances of their times. The relative stability of the rules of al-ʿĀdil and his son, al-Muʿazzam ʿĪsā did result in some infrastructural projects in central and southern Jordan, but the fluctuating political situation in the 1230s and later greatly restricted the potential for long-term investment. The status of Karak varied considerably during this time, and this presumably will have affected the numbers of military officers, bureaucrats and other members of the elite who were stationed there.

The defences of central and southern Jordan were an important component of Ayyubid policy, though not all of the former Frankish installations were retained. From the time of al-ʿĀdil through to the end of the dynasty there is evidence for relatively regular investment in the walls and towers of Karak. The cathedral in the town was also replaced by a mosque. Shawbak seems to have been particularly favoured with investment, much of which focused not on fortifications but on the creation of gardens and the promotion of specialised agriculture. There is evidence of energetic investment in military architecture in Balqāʾ with the construction of an impressive castle in Salt, the extensive renova-

⁴ This research is being conducted by Robin Brown and Kevin Reilly. Brown rightly cautions that the recovery of pig bones in an excavated context does not mean that the occupants in that period *must* have been Christian. I am grateful to Robin Brown for discussing her research with me. On the problems involved in the correlation between pig bones and ethnicity/confessional allegiance, see Hesse and Wapnish (1997).

tion of the Roman fort in Azraq, and the construction of a watchtower on the ancient citadel in ‘Ammān. Much of this activity was directed by functionaries of al-Mu‘azzam ‘Īsā. One of the motivations for the construction of Salṭ seems to have been the desire to protect the roads of the region, and this concern for the transport infrastructure is also seen in the erection of a *khān* at ‘Aqaba and the plans to build a road for the Syrian *ḥajj*. Other interesting examples of Ayyubid investment is to be seen in the promotion of copper smelting in Wādī Faynān in the 1220s/30s and the extraction of iron ore at sites to the north and south of the Wādī Zarqā’.

Aside from the architecture, the Ayyubid period has left surprisingly meagre imprint in the archaeological record at Karak and elsewhere in central and southern Jordan. A small group of glazed stoneware can be assigned to two phases, *c.* 1150–1200 and *c.* 1200–1250. To this may be added a larger number of less precisely dated lead-glazed, unglazed wheelthrown and handmade wares. As with the discussion of Frankish finds, it may be that targeted excavation of Ayyubid structures in Karak castle will provide further information, but the existing picture accords with the results from other sites south of the Wādī Zarqā’. The ‘Ayyubid’ phases in the reception complex at Shawbak produced surprisingly few glazed shards (and no Syrian stoneware wares), while the post-Frankish levels at Wu‘ayra were even more sparse, being dominated by handmade pottery. Further north at Ḥasbān, Sauer reports a marked differences between the relatively diverse ‘Mamluk’ assemblage (*c.* 1260–1400) and the ceramics from the preceding phase.⁵ A similar picture can be seen in field surveys: for instance, diagnostic late twelfth- and early thirteenth-century glazed pottery is very rare in the material gathered on the Miller survey of the Karak plateau.⁶ Despite the encouragement of trade by the Ayyubids, it would seem that this had little impact upon rural life in Jordan. If anything, it would appear that the political instability of the time led villagers increasingly to rely upon locally-based craft activities, of which handmade pottery is most conspicuous in the archaeological record.

As with the Ayyubids, it is also possible to divide the Mamluk period into two phases. The first phase, encompassing the rules of Baybars and the Qalāwūnid sultans through to *c.* 1350, is marked by significant state

⁵ Sauer (1973 and 1994).

⁶ This evidence is reviewed in greater detail in Milwright (2006), pp. 15–24.

investment and high levels of prosperity in the region. Perhaps the key dates in tracking the end of this phase are the siege of Karak in 1343 and the first wave of the Black Death in Bilād al-Shām in 1348. The second phase from the mid fourteenth through to the end of Mamluk control in the region in 1516 witnesses much less evidence of direct engagement in the region by sultans and powerful amirs, and can be characterised in general terms as one of economic decline. Clearly, caution is in order when using such sweeping generalisations. Recent studies have proposed that some areas of rural Jordan continued to be relatively prosperous into the late fourteenth and early fifteenth centuries,⁷ while Khalīl al-Zāhirī indicates that the governor of the *mamlaka* of Karak could still expect to receive a substantial annual income in the 1420s. That said, during the late fourteenth and fifteenth centuries the authorities in Cairo and Damascus evidently become less and less willing to commit troops and other resources to the regions south of the Wādī al-Mūjīb. Over the long term, this lack of investment naturally had a detrimental effect upon security and levels of agricultural productivity.

Returning to the first Mamluk phase it is possible to identify several priorities behind state investment. First, the defences of the region had to be improved. Through the second half of the thirteenth century the Mamluks were faced with the threat from the Mongol armies to the east as well as the continued Frankish presence on the coast of Syria. Central and southern Jordan comprised part of the eastern frontier and, as such, the defences needed to be strengthened and the system of communications improved. The defensive capabilities of Karak also made it a suitable location for storage of supplies, weapons, money, and the stationing of troops. Second, Baybars and the Qalāwūnid sultans were well aware of the need to maintain close relations with the bedouin of the Bādiya al-Shām, and Karak was the place where the state would negotiate with the southern tribes. Like the Ayyubids before them, the Mamluks created institutional structures by which tribal leaders could be induced to participate in aspects of security and surveillance. Third, an effective administration and strong military presence ensured that the state could exploit the economic potential of the region. Most important were the crops of wheat and other cereals and the sugar produced in the Jordan valley and Dead Sea Ghawr,

⁷ See Walker (2004 and 2005).

though there were also other specialised crops and the livestock raised by the bedouin. The mineral reserves of the Dead Sea were probably of minor economic significance, and the evidence for copper smelting in the Mamluk period at Wādī Faynān is inconclusive. Fourth, the status of the Mamluk sultans as defenders of Sunni orthodoxy required them to ensure the security of the annual pilgrimage that passed through central and southern Jordan and, to a lesser extent, invest in the religious institutions of the region.

Baybars was responsible for the refortification of Karak castle that included the massive south keep. His activities also extended to the creation of a line of walls and towers around the town as well as the renovation of the cisterns. Further work of the same nature was undertaken by Qalāwūn and his successors. At the end of the thirteenth century the outer fortifications of Shawbak were completely remodelled. There is also evidence for renovations of the fortress of Saḡ in the 1260s. Investment in architecture was not all military in nature, however. The excavation of the 'reception hall' in Karak castle suggests an initial construction period in the early fourteenth century,⁸ and this dating ties in well with the extensive urban redevelopment of Karak ordered by sultan al-Nāṣir Muḥammad in 1311. The transport infrastructure was improved through the construction of postal stations as well as forts, *khāns* and reservoirs connected to the *ḥajj* route. Excavations at Ḥasbān have revealed the impressive residence and administrative buildings of the local governor of Balqā'. This period also provides evidence for the construction of new mosques and the refurbishment of places of Muslim pilgrimage in central and southern Jordan. While some of the mosque building probably derives from local initiatives, the intervention of the Mamluk authorities in the upkeep of shrines such as those of the companions of the Prophet who died at the battle of Mu'ta is indicated by textual sources and extant monumental inscriptions.

The ceramic record provides abundant evidence for the prosperity of the first Mamluk phase. As noted in chapter 8, the largest body of

⁸ Yasser Tabbāa has suggested an Ayyubid date for this complex because of its similarity to Zengid and Ayyubid four-*ūwān* royal reception halls in Shawbak and sites in Syria. The presence of a fourteenth-century coin beneath the floor of the reception hall (as well as the absence of any diagnostic Ayyubid-period ceramics) argue for a later date. See Tabbāa (2006), p. 182.

inter-regional and international distribution wares can be assigned to the period, *c.* 1250–1350. It is at this time that one finds the greatest numbers of Syrian decorated stoneware wares and imported Chinese ceramics. The excavations and surveys of rural settlements of the Karak plateau provide further evidence. Though handmade wares are most ubiquitous on all sites, unglazed wheelthrown wares, lead-glazed earthenwares, and glazed stoneware wares appear with considerable regularity, particularly on sites near to the King's Highway or in the immediate vicinity of Karak.⁹ A similar picture may be seen in excavations and surveys in the Balqā', while the surprising richness of the finds from the storeroom of the local governor's residence at Ḥasbān is another indication of the wealth of this area in the early Mamluk period. Archaeological research in the Jordan valley has led to the discovery of many sugar mills, and settlements of this region often report significant numbers of glazed wares in their ceramic assemblages. This pattern is also repeated around the south end of the Dead Sea. The results from surveys south of the Wādī al-Ḥasā suggest that, with the exception of Shawbak and possibly Ṭafīla, the inhabitants of Sharāt al-Jibāl did not see the same benefits in terms of access to ceramics and other goods imported from Palestine and Syria.

In the second Mamluk phase one can detect a decreasing engagement with Karak by the elites of Damascus and Cairo, though there were periods when the town and castle played a major role in political life (for instance, in the accession of sultan Barqūq in 1389 and the rebellion of 1410–11). Evidence of investment in architecture is much more sporadic than the first Mamluk phase, and there is also little to suggest extensive investment in specialised agriculture. This would appear to be part of a general development in Bilād al-Shām in which there was a failure to renovate key aspects of the infrastructure of the provinces. For instance, historical studies indicate that the extensive postal system (*barīd*) established by Baybars fell into disuse early in the fifteenth century. The root of some of these developments may be traced to the second quarter of the fourteenth century, however.¹⁰ For instance, the maintenance of the defences of the eastern frontier of the Mamluk sultanate may have become less of a priority following

⁹ For a more detailed survey of the evidence, see Brown (1992 and 2000). For the excavations of Mamluk period material at Khirbat Fāris, see McQuitty *et al.* (2000).

¹⁰ For a detailed survey of this period, see Levanoni (1995).

the accord signed with the Ilkhanate. In addition, the extensive architectural patronage of the first Mamluk phase meant that sultans and amirs after *c.* 1350 were not faced with need to construct new castles and forts to ensure the defence of the region. That said, it is difficult to see why the Mamluk authorities did not address other pressing security issues. For instance, they do not seem to have maintained such active relations with the bedouin through the fifteenth and early sixteenth centuries. This had been one of the great policy successes of the first Mamluk phase, and the increasing insecurity of the rural areas and the roads in the *mamlaka* of Karak can probably be blamed upon the state's failure to negotiate effectively with the bedouin.

What then were the objectives of this second Mamluk phase and how were they manifested in specific policies and architectural patronage? Presumably, there was a desire to collect the revenue generated by the region, though by the second half of the fifteenth century the Mamluk state was unable to stamp their authority on southern Jordan. The sultans of Cairo and governors in Bilād al-Shām continued to work to ensure the safe passage of pilgrims and other travellers through Jordan, and there are several references to the equipping of forces to pacify the bedouin. At the end of the Mamluk sultanate one also finds evidence for construction at 'Aqaba, and for the general improvement of the road that connected Egypt with the Ḥijāz. The policies and objectives of the Ottomans in the sixteenth century exhibit areas of continuity with the second Mamluk phase, even to the extent that in the aftermath of the conquest they retained Mamluk officials in their posts. The institutional reorganisation instituted in 1519 by the new Ottoman governor of Damascus, Iyās Pāsha, led to the installation of the first Ottoman local governor (*sanjaqbey*) in Karak. The *daftar*s of the sixteenth century indicate a desire to collect the tax revenues for the south of Bilad al-Shām, though it is an open question as to how much was actually collected on a regular basis in the lands south of the Wādī al-Zarqā'. Probably the most important priority of the Ottoman regime in central and southern Jordan was to ensure the safe passage of the annual pilgrimage caravan. As in earlier times, this was done in part through financial inducements and threats of military force against local bedouin tribes. The more ambitious dimension to this larger policy was the construction of a chain of small forts (complemented by other projects including pools and bridges) along the eastern route through Jordan. Each of these forts contained a small garrison and held supplies needed for the pilgrimage caravan.

The ceramic record for the second Mamluk and the early Ottoman phases provides a general picture of rural decline, though this should be set against the relatively healthy economic impression given of agricultural productivity in the Ottoman *daftars*. On the Karak plateau only one site, other than Karak itself, reported the presence of blue and white stonepaste wares, and it is also difficult to detect many examples of diagnostic lead-glazed wares of the late fourteenth or fifteenth centuries. Rural settlements appear to have been abandoned at this time (the recurrent waves of plague through the second half of the fourteenth century must have reduced the rural population), with many villagers choosing to move to more easily defensible areas in the south and east of the plateau.¹¹ Evidence for a substantial reduction in sedentary occupation can be seen in the Balqā' during the fifteenth and sixteenth centuries. Historical sources indicate the collapse of the sugar industry in the Jordan valley and Dead Sea Ghawr during the fifteenth century, and this is largely borne out by archaeological research. As the principal market town and administrative capital of southern Jordan Karak continued to import glazed wares from Palestine, Syria, and further afield. The ceramics from areas A–F suggest two peaks in the consumption of international distribution wares (*c.* 1375–1425 and *c.* 1475–1525) in the late Mamluk and early Ottoman periods. Turning to the historical record tentative correlations might be drawn with the reigns of sultans Barqūq and Faraj in the first case, and in the second case with events such as the appointment of Qāyṭbāy al-Khāṣṣakī as governor of Karak in 1512 or the imposition of Ottoman rule in southern Jordan between 1516 and 1520.

The historical development of Karak differs from that of all other settlements south of the Wādī Zarqā'. The construction of a major castle at the southernmost point of the town propelled Karak into the wider political life of the Middle Islamic Levant. Not only did the presence of the castle confer a greater status on Karak, but it also signalled an important change in the nature of the population. As the seat of a Crusader lord, an Ayyubid sultan or amir, a Mamluk *nā'ib*, or an Ottoman *sanjaqbey*, Karak had to accommodate a wide variety of bureaucrats, military officers, and figures with religious and judicial responsibilities (see chapter 3). Both the composition and scale of these diverse populations fluctuated from the mid twelfth to the first half of

¹¹ Brown (1992), chapter 11.

the seventeenth century depending upon the relative importance of the region in the policies of the kings of Jerusalem and, later, the Muslim authorities in Damascus and Cairo, but the more important general observation at this point is that the presence of such elite groups would have stimulated economic activity in a way that is likely to be apparent in the archaeological record. The ceramics from Karak represent the physical survivals of a much larger network of supply and trading patterns encompassing many manufactured goods and raw materials that are not preserved in the archaeological record. In order to assess the spheres of economic influence in which Karak operated in the Middle Islamic period it is necessary to bring together the available historical data on resources and trade with the distribution patterns suggested in the analysis of areas A–F.

The survey of Karak and its dependent regions in chapter 4 revealed, not surprisingly, that the economy of the Middle Islamic period was dominated by the agricultural sector. The plains of Balqā', Arḍ al-Karak, and Sharāt al-Jibāl were extensively cultivated, with cereal crops (wheat and barley) making up the bulk of the agricultural produce. Other produce mentioned in the sources are fruits, almonds, honey, olives and olive oil. Numerous water-powered mills existed in *wādīs* for the grinding of flour. The livestock of the region—goats, sheep, horses, camels, and buffalo are all mentioned—were another valuable resource. What few sources we have dealing with the population of central and southern Jordan indicate that the Balqā' and the Karak plateau were both densely settled with villages from the twelfth to the early sixteenth century. While settlement density was evidently lower south of the Wādī al-Ḥasā, the fertility of the land is stressed in numerous sources of the period. The Ottoman *daftars* of the sixteenth century still record a relatively prosperous agricultural sector, though it is noticeable that the settled population of the Balqā' had greatly diminished by this time, and it seems likely that all areas experienced a decrease in levels of sedentary occupation by the end of the century. There is abundant evidence that the agricultural surplus of the plains of central and southern Jordan were exploited by the kingdom of Jerusalem and later Muslim rulers. Wheat and other commodities were being transported west into Palestine throughout the Middle Islamic period. Though the exports from the plains of central and southern Jordan consisted predominantly of agricultural produce, it is worth noting that flat-weave rugs from Karak and Shawbak were also traded to Palestine in the fourteenth century.

The bulk of the exports from Jordan passed west across the Jordan valley or around the south end of the Dead Sea, but it is possible to find evidence of trade over longer distances. In the thirteenth and fourteenth centuries fruit from the vicinity of Shawbak was sent to Egypt, and livestock owned by Mamluk sultans might also be brought from pastures in Jordan to the Egyptian capital. Most of the internationally exported commodities of the region derived, however, from the Jordan valley and Dead Sea Ghawr. Dates from the southern Ghawr appear to have been highly valued, and the sources mention rice, indigo, perfumed plants, and a wide variety of fruit in the Jordan valley, but the most economically significant commodity was, without doubt, sugar. From the fourteenth century (and perhaps earlier), the sugar mills of the Jordan valley were administered by Damascus, but Karak still controlled those installations operating around the south and east shores of the Dead Sea, and possibly in the *wādīs* below Shawbak. We know from fourteenth-century trade manuals that the sugar from these areas was extensively traded in the Mediterranean, while the large numbers of sugar pots and syrup jars found in Karak castle indicate that sugar and molasses were also popular for local consumption. Though the Dead Sea and Wādī ‘Araba are blessed with mineral resources, it is difficult to assess how much they were exploited in the period. One example of probable state intervention is provided by the Ayyubid period copper smelting operation at Wādī Faynān.

In summary, it is clear that the regions controlled by Karak should be seen primarily as exporters of raw and processed agricultural goods.¹² This also includes livestock and related commodities such as leather, wool, and dairy produce. With the minor exception of rugs sent to Palestine, southern Jordan did not export manufactured goods—pottery, glass, metalwork, textiles, and so on—and what manufacturing capacity there was in the plains south of the Wādī al-Mūjib produced items that were circulated within the region. Potters in settlements at the south end of the Dead Sea and in the Balqā’ may have produced some lead-glazed wares that were distributed more widely in the south of Bilād al-Shām. Importantly, there is no evidence to suggest that the greater wealth brought by the presence of members of the Frankish, and later Muslim administrative and military elites stimulated the establishment

¹² Khalīl and its surrounding area are not included in this discussion because they were only administered by Karak only for limited periods.

of specialised craft workshops in Karak or the immediate vicinity. Certainly, we have evidence for active markets in the town from the twelfth to the sixteenth century, but the luxury artefacts traded there would all have been imported from Palestine, Syria, or further afield.

The written sources provide no evidence for what was imported into Karak or the remainder of central and southern Jordan, and so one needs to turn to the archaeological record for answers. We gain some idea of the potential richness of the material culture of the governors of the *mamlaka* of Karak by considering the copper tray made for Jamāl al-Dīn Āqūsh al-Ashrafī between 1291 and 1309.¹³ The glass found in area A, much of which seems to be of Syrian origin, contains marvered and enamelled shards (pls. 40 & 41). The painted stucco fragments from area A (pl. 39) and the surviving *girih* (geometric interlace) panel in a chamber on the west side of the castle (pl. 16) both indicate that skilled craftsmen were also brought to Karak to undertake the decoration of the quarters used by sultans and amirs. The Frankish inhabitants of Karak also ornamented the interiors of buildings with fresco paintings (presumably undertaken by painters brought over from Palestine), though, sadly, the few remnants described by nineteenth-century observers have long since disappeared.¹⁴ In other words, we should not assume that the somewhat dour impression conveyed by the religious and residential/palatial structures within the walls of the fortress of Karak accurately reflects their appearance during the Middle Islamic period.

The ceramics recovered from excavations and surveys provide the most extensive evidence for the importation of manufactured goods to Karak, and several important groupings were identified in the analysis of the pottery assemblages A–F presented in chapter 8. In terms of overall volume of imports, Palestine was the most important player in the trading relationships enjoyed by Karak in the Middle Islamic period. As agricultural produce flowed west, manufactured items went east to the principal economic centres of the plains of central and southern Jordan (comprising Salt, ‘Ammān and Ḥasbān in the Balqā’, and Karak, Shawbak and Ṭāfila to the south). Jerusalem can be identified with reasonable certainty as an important producer of plain and decorated lead-glazed wares found in Karak, while it is probable that Khalīl (well known for the production of glass), Gaza and other towns in southern Palestine

¹³ Formerly in the collection of R.A. Hariri. See Mayer (1933), pp. 71–72.

¹⁴ See description in Irby and Mangles (1823), pp. 380–81.

also contributed to the trade in wheelthrown unglazed, relief-moulded and lead-glazed wares passing around the south end of the Dead Sea and onto the Karak plateau. Much smaller quantities of unglazed and glazed earthenwares were supplied to Karak by workshops operating in the Balqā'. The decorated glazed wares of Palestine and the Balqā' were distributed in the south of Bilād al-Shām, with few reported finds appearing north of Damascus.

The available archaeological evidence points to Damascus as the principal source for the stonepaste wares found in Karak. This economic relationship can be traced from the second half of the twelfth century through to the beginning of the sixteenth, with a concentration of finds dating from the mid thirteenth to the early fifteenth centuries. From the end of the Crusader phase in central and southern Jordan, the Syrian capital represented the political and economic centre that defined the activities of the administrative and military population in Karak through much of the Middle Islamic period, and it is hardly surprising to see this reflected in the ceramics in areas A–F. Stonepaste wares, and other Damascene manufactured goods were probably transported to Karak along the King's Highway, an arduous route (particularly for fragile items like ceramics) that presumably increased the unit cost of the items when they found their way to local markets in Jordan. That the King's Highway brought some additional prosperity to the Karak plateau is indicated by the higher percentage of glazed wares that appear in the rural communities on either side of the road. Of course, stonepaste wares (including containers for other valuable commodities) from Damascus were being traded much more widely in the Middle East and around the Mediterranean, and the Jordanian market for these items probably represented a minimal percentage of the total production of the workshops of Damascus.

There is very little evidence in the Karak assemblages for the importation of glazed wares of any kind from the production centres of Egypt or northern Syria. While the virtual absence of ceramics from northern Syria may be explained by the greater proximity of the industries of Damascus, one might have expected a little more evidence of diagnostic pottery from Egypt (if only because of the regular visits to the castle by sultans and amirs from Cairo during the Mamluk period). The limited export of agricultural produce to Egypt is mentioned in the historical sources, but there is no indication of any commodity that was sent in the other direction. In the cases of the ceramics imported from beyond the borders of the Ayyubid, Mamluk and Ottoman sultanates, one

can only speculate about the means by which they found their way to Karak. Italian sgraffito wares were probably imported first to the coast of Palestine before making their way east into Jordan. Chinese glazed wares appeared in cargoes landing at ports on the Red Sea, and it seems likely that from the twelfth century Bilād al-Shām was served by places such as Ṭūr in the Sinai and Jidda on the Arabian coast (Ayla/ʿAqaba was no longer participating in international trade at this time). The land route would have taken many trade caravans near to Karak, and it is possible that the inhabitants of the castle bought their Chinese vessels, and other commodities from the Red Sea trade, direct from travelling merchants. Alternatively, the finds from Karak may have come via Damascus, either by commercial means or among the private possessions of those sent from the Syrian capital to serve in official capacities in central and southern Jordan.

It is worth emphasising the broad chronological range of the international distribution wares at Karak, encompassing material from the mid twelfth to the early sixteenth century. The elite inhabitants of the castle continued to enjoy some access to luxury ceramics in the fifteenth and sixteenth centuries even when the rural economy had fallen into serious disrepair. If we turn to the ceramic assemblages from the other settlements of the plateau, as well as those south of the Wādī al-Ḥasā, it seems that there was virtually no market for Syrian stonepaste wares after the last quarter of the fourteenth century. Predictably, fifteenth- and sixteenth-century imports from Italy and China are also absent in the archaeological record. The economic and demographic decline of the sixteenth century was clearly more marked in the regions of Jordan than in Palestine. In the plains south of the Wādī Zarqāʾ there was a consistent lack of investment in the security of roads and of the communities that were the foundation of the rural economy. The breakdown of the transport infrastructure meant that it became increasingly difficult to transport the agricultural produce out of the region. This does not mean that areas like the Karak plateau ceased to produce a surplus of wheat, but rather that it was less economically viable to transport it to markets in Palestine.¹⁵ Lack of investment is

¹⁵ Cf. the comments of Charles Doughty mentioned in the introduction. For a more positive assessment of the later Mamluk period, see Walker (2005).

probably also the root cause of the collapse of the once highly lucrative sugar industry of the Jordan valley and Dead Sea regions.¹⁶

To conclude, Karak may be regarded as a market town whose history was transformed by the construction of a major castle at its southern extremity. The initial phase of building in the twelfth century can be connected with the expansion of the Crusader colonial enterprise east of the Jordan river and Dead Sea (and the desire to exploit the available resources). We also have to look outside of the borders of central and southern Jordan in order to trace the historical development of Karak in the remainder of the Middle Islamic period. While the economic potential of the agricultural sector is certainly a factor in assessing the involvement of the Ayyubid, Mamluk and Ottoman state in Karak and its dependent regions, this must be set against the wider strategic and political concerns of the rulers of Damascus or Cairo. The presence of members of the Frankish and Muslim elites in Karak from the mid twelfth to the early seventeenth century brought greater wealth to the town and the immediate vicinity through the stimulation of inter-regional and international trade, but this did not prove to be a sustainable urban economy over the long term. There even were attempts to impose the civic components of a model 'Islamic city' in the early fourteenth century, but corresponding failure to promote a diverse industrial/craft sector in and around Karak meant that this urban project was built on precarious foundations. The ceramics from excavations and surveys in Karak provide clear evidence that the wealthier inhabitants looked to the cities of Palestine, Syria, and further afield for their luxury goods, while historical sources indicate that the main economic contribution of central and southern Jordan was as an exporter of agricultural produce and livestock. With the disappearance of central government control from the regions south of the Wādī Mūjib after *c.* 1650, Karak reverted to its former role as a small town surrounded by a rural plateau.

¹⁶ This was both a lack of investment in security and a failure to promote technological innovation in the manufacturing of sugar. The historical aspects of this question are surveyed in Ashtor (1981). For more recent archaeological work in Jordan and Cyprus, see Maier and Wartburg (1983); Jones *et al.* (2000).

APPENDIX ONE

CATALOGUE OF THE CERAMICS FROM KARAK: AREAS A–F

Notes

This appendix comprises four sections. The tables in the first section give a statistical breakdown of the ceramics from areas A–F and from the ceramics conducted by Robin Brown in the ‘reception hall’ in Karak (Brown 1989). The second section provides the descriptions of the ceramics illustrated on catalogue plates 1–36. In the cases of pottery decorated with slip-painting or glazes, the catalogue entry lists the condition of the interior of the vessel first and the exterior second. These characteristics are indicated as follows: e.g. glaze colour = green/yellow (i.e. green on the interior and yellow on the exterior). Where a single descriptive category (e.g. ‘slipped’) or glaze colour (e.g. ‘green’) is employed this means that the vessel has been treated in the same way on the interior and exterior. The third section gives brief descriptions of the fabric types identified during the analysis of the ceramics of areas A–F. The fourth section lists glaze colours on the pottery according to their notation in the *Munsell Book of Colour* (Baltimore, 1976).

Section 1: Tables

WARE	AREA						TOTAL
	A	B	C	D	E	F	
Handmade	250	14	23	57	20	123	482
Handmade unpainted	145	4	8	17	11	57	247
Handmade painted	95	10	15	40	9	66	235
Unglazed wheelthrown	3,274	61	94	148	38	1,317	4,932(1,564)
Relief-moulded unglazed	22	0	0	0	0	6	28
Lead-glazed	616	78	70	242	15	850	1,871 (772)
Plain lead-glazed	545	73	8	224	5	769	1,619 (592)
Lead-glazed painted	0	0	0	1	0	5	6
Slip-painted							
lead-glazed	5	1	3	2	0	5	15
Sgraffito	29	2	1	2	1	13	48
Relief-moulded							
lead-glazed	37	2	1	12	0	59	111
Alkaline-glazed	381	7	4	34	0	450	876
Plain alkaline-glazed	58	3	1	13	0	185	260
Black and white	21	0	0	0	0	20	41
Black under turquoise	48	1	2	6	0	30	85
Polychrome	13	0	0	0	0	14	27
Black and turquoise	51	0	0	2	0	61	114
Blue and black	75	0	1	7	0	102	185
Blue and white	92	3	0	0	0	32	127
Lustre	0	0	0	0	0	2	2
Chinese imports	8	0	0	6	0	6	20
Celadon (green ware)	3	0	0	6	0	6	15
<i>Qingbai</i>	1	0	0	0	0	0	1
<i>Shufu</i>	1	0	0	0	0	0	1
Blue and white							
porcelain	3	0	0	0	0	0	3
TOTAL	4,542	161	191	481	72	2,754	8,201

Table 1: Shards count from the Karak assemblages A–F. Bold type indicates the main categories of unglazed and glazed pottery. Bracketed numbers indicate the diagnostic shards in the total.

WARE	AREA						TOTAL
	A	B	C	D	E	F	
Unglazed							
wheelthrown	3,274	61	94	148	38	1,317	4,932 (1,564)
Storage jar (<i>zūr</i>)	68	4	0	12	11	15	110
Basin	61	3	3	2	3	14	86
Sugar pot	232	10	3	35	4	126	410
Syrup jar	47	0	0	1	0	1	49
Drainpipe	100	0	0	5	0	42	147
<i>Ibrīq</i>	140	0	6	5	0	97	248
Bowl	31	3	7	7	0	9	57
Relief-moulded							
unglazed	22	0	0	0	0	6	28
Large containers	3	0	0	0	0	0	3
Canteens and jugs	9	0	0	0	0	2	11
Lamp	4	0	0	0	0	1	5
Sphero-conical vessel	1	0	0	0	0	2	3
Tobacco pipe	6	0	0	0	0	0	6
Plain lead-glazed	545	73	8	224	5	769	1,619 (592)
Bowl	231	17	5	43	5	217	522
Closed vessel	36	2	2	1	0	24	65
Lamp	3	0	1	0	0	1	5

Table 2: Shard count of unglazed wheelthrown, relief-moulded unglazed and plain lead-glazed wares arranged according to vessel type. Bold type indicates the main categories. Bracketed numbers indicate the diagnostic shards in the total.

WARE	PHASE		TOTAL/ PERCENTAGE
	I	II	
Handmade unpainted	17	46	63 (13%)
Handmade painted	2	11	13 (3%)
'Cream ware'	188	47	235 (48%)
Drainpipe	0	1	1 (>1%)
<i>zūr</i>	128	6	134 (27%)
Glaze	22	8	30 (6%)
Imported Glaze	10	2	12 (2%)
TOTAL	367	121	488

Table 3: Main ceramic wares excavated in the 'reception hall' of Karak castle (excluding pit K1:5). Adapted from table in Brown (1989).

*Section 2: Catalogue Pages 1–36***Catalogue page 1. Handmade wares without slip-painting****1. A.1**

Handmade undecorated pot (rim). Fabric 1; Technique = handmade.

Comments: Signs of charring on the exterior. Burnished on exterior. A.2 is a rim from the same vessel and A.3–18 are body shards from the same type.

Comparanda: Ti'innik (Ziadeh 1995: fig. 14.8).

2. A.19

Undecorated pot (rim). Fabric 2; Technique = handmade.

Comparanda: Edom region (Hart and Falkner 1985: fig. V.27); Jerusalem, Damascus Gate (Wightman, 1989: pl. 54.2); Qubayba (Bagatti, 1947: fig. 29.4); Southern Ghawr, Fayfā' (Rast and Schaub, 1974: fig. 10.289, 290); Tal Abū Qad'ān, phase J (Franken and Kalsbeek, 1975: fig. 74.5); Ti'innik (Ziadeh, 1995: fig. 10.3); and Wu'ayra, phase IA (Brown, 1987: fig. 9.19; Vannini *et al.*, 1995: fig. 17.1).

3. A.20

Undecorated handled bowl (rim). Fabric 2; Technique = handmade.

Comparanda: 'Afūla (Dothan, 1955: fig. 8.17); Jarash (Tholbecq, 2000: pl. VI.48); Jerusalem, Ophel (Crowfoot and Fitzgerald, 1929: pl. XVI.26); Khirbat Fāris (McQuitty and Falkner, 1993: fig. 20.35); Šāṭāf (Gibson *et al.*, 1991: fig. 21.7); Ti'innik (Ziadeh, 1995: fig. 8.4); and Wu'ayra (Vannini *et al.*, 1995: fig. 19.6).

4. A.21

Undecorated bowl (rim). Fabric 6; Technique = handmade.

Comparanda: Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 41.16); Jerusalem, Damascus Gate (Wightman, 1989: pl. 50.8); Khirbat Fāris (McQuitty and Falkner, 1993: fig. 20.33); and Ti'innik (Ziadeh, 1995: fig. 9.10).

5. A.22

Undecorated bowl (rim). Fabric 6; Technique = handmade.

Comparanda: Tal Abū Qa'dān, phase Q (Franken and Kalsbeek, 1975: fig. 75.13).

6. A.29

Undecorated bowl (rim). Fabric 3; Technique = handmade.

Comments: Interior has been plastered.

Comparanda: Tal Abū Qa'dān, phase Q (Franken and Kalsbeek, 1975: fig. 75.16).

7. E.5377

Undecorated (rim). Fabric 7; Technique = handmade.

Comparanda: Karak plateau, Kathrabba (Brown, 1992: pp. 432–33, pl. 13.4); Edom region (Hart and Falkner, 1985: fig. VI.35).

8. A.38

Undecorated lamp(?) (base). Fabric 16; Technique = handmade.

Comments: Very friable pale ceramic.

9. A.27

Undecorated pot (rim). Fabric 7; Technique = handmade.

Comparanda: Ṭabaqat Faḥl (Smith, 1973: pl. 76.916); and Tīʿinnik (Ziadeh, 1994: fig. 9.8).

10. A.26

Undecorated pot (rim). Fabric 2; Technique = handmade.

Comparanda: Edom region (Hart and Falkner, 1985: fig. V.23); and Southern Ghawr, Fayfāʾ (Rast and Schaub, 1974: fig. 10.288).

11. A.24

Undecorated bowl (rim). Fabric 2; Technique = handmade.

12. A.39

Undecorated (base). Fabric 2; Technique = handmade.

13. A.35

Undecorated bowl (base). Fabric 7; Technique = handmade.

Comparanda: Edom region (Hart and Falkner, 1985: fig. VI.48); and Tal Abū Qaʿdān, phase Q (Franken and Kalsbeek, 1975: fig. 75.24).

14. A.37

Undecorated (base). Fabric 2; Technique = handmade.

Comparanda: Qubayba (Bagatti, 1947: fig. 32.14).

15. A.32

Undecorated (base). Fabric 2; Technique = handmade.

Comparanda: Dhibān (Tushingam, 1972: fig. 8.30); Edom region (Hart and Falkner, 1985: fig. VI.49); Greater ʿAmmān region (Abu Dayyah *et al.*, 1991: fig. 9.22); ʿIrāq al-Amīr (Brown, 1979: fig. 2.96); Jarash (Tholbecq, 2000: pls. VI.43; VII.59); Ṭabaqat Faḥl (Smith, 1973: pl. 74.955); and Tal Abū Qaʿdān, phase J (Franken and Kalsbeek, 1975: fig. 74.19).

16. A.41

Undecorated storage jar (base). Fabric 7; Technique = handmade.

Comments: Plastered on exterior.

Comparanda: Dhibān (Tushingam, 1972: fig. 8.28); and Wuʿayra, phase IA (Brown, 1987: fig. 9.14).

17. A.42

Undecorated storage jar (base). Fabric 4; Technique = handmade.

Comparanda: Negev, Tal Jimna (Schaefer, 1989: fig. 6.23); and Tal Abū Qaʿdān, phase R (Franken and Kalsbeek, 1975: fig. 76.9).

18. A.40

Undecorated storage jar (base). Fabric 2; Technique = handmade.

Comments: Hole drilled in base. Grain bin?

Comparanda: Southern Ghawr, Fayfāʾ (Rast and Schaub, 1974: fig. 11.293).

19. A.31

Undecorated juglet (base). Fabric 4; Technique = handmade.

Catalogue page 2. Handmade wares without slip-painting and handmade slip-painted wares

1. A.43

Undecorated storage jar (handle). Fabric 7; Technique = handmade.

Comparanda: Dhibān (Tushingam, 1972: fig. 8.32); Southern Ghawr, al-Rujūm (MacDonald, 1992: pl. 33.h); and Tal al-Šāfiyya (Bliss and MacAlister, 1902: pl. 65.12).

2. A.44

Undecorated storage jar (handle). Fabric 7; Technique = handmade; slipped; Slip colour = buff1.

Comments: Perhaps originally painted on the exterior.

Comparanda: Tal Abū Qa'dān, phase O (Franken and Kalsbeek, 1975: fig. 65.31).

3. A.45

Undecorated storage jar (handle). Fabric 2; Technique = handmade.

Comparanda: Southern Ghawr, Fayfā' (MacDonald, 1992: pl.30.n).

4. A.50

Undecorated (handle). Fabric 8; Technique = handmade.

Comments: Low-fired and highly friable fabric. Similar shape to slip-painted example, A.243.

Comparanda: Southern Ghawr, Fayfā' and Rujūm (Rast and Schaub, 1974: fig. 11.295; MacDonald, 1992: pl. 33.m).

5. A.47

Undecorated storage jar (handle). Fabric 3; Technique = handmade.

6. F.5517

Undecorated (handle). Fabric 5; Technique = handmade.

7. D.5114

Undecorated (rim?). Fabric 2; Technique = handmade.

Comments: Fragment has been reshaped after firing. Unclear function.

Comparanda: Khirbat al-Mu'allaq (Lindner *et al.*, 1996: fig. 24.8).

8. A.149

Slip-decorated bowl (rim). Fabric 2; Technique = handmade; slip painted = red1, grey1/undecorated.

Comments: Similar type to the handled bowl A.20.

Comparanda: Abū Ghawsh (De Vaux and Steve, 1950: pl. F.14, 24, 25); Jerusalem, Damascus Gate (Wightman, 1989: pl. 52.2, 5); Khirbat Fāris (McQuitty and Falkner, 1993: fig. 20.35); Sāṭāf (Gibson *et al.*, 1991: fig. 21.4); Tal Abū Qa'dān, phase O (Franken and Kalsbeek, 1975: fig. 65.8); and Ti'innik (Ziadah, 1995: fig. 8.2, 3).

9. F.5496

Slip-decorated bowl (rim). Fabric 2; Technique = handmade; slip painted = brown2.

Comments: Lateral ridge on exterior of vessel.

Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl.51.3). Similar painting style: Ḥasbān, 'Ayyubid' phase (Sauer, 1973: fig. 4.150).

10. D.4903

Slip-decorated bowl (rim). Fabric 13; Technique = handmade; slip painted = red1.

Comments: Raised ridge running at 45° down exterior of vessel.

Comparanda: Edom region (Hart and Falkner, 1985: fig. VI.45); Ḥasbān 'Ayyubid' phase (Sauer, 1973: fig. 4.149); and Tal Saylūn (Andersen, 1985: pl. 10.59).

11. D.4901

Slip-decorated bowl (rim/handle). Fabric 15; Technique = handmade; slip painted = red2, grey2.

12. F.5505

Slip-decorated bowl (base). Fabric 8; Technique = handmade; slip painted = grey1, red4.

Comments: Decorated on the underside of the base.

Comparanda: Dhibān (Winnett and Reed, 1964: pl. 66.27); and Jerusalem, Damascus Gate (Wightman, 1989: pl. 52.4; 55.7). Similar decoration: Naḥal Yattir region (Govrin, 1991: site 63, fig. 5.5).

Catalogue page 3. Handmade wares with slip-painting**1. A.150**

Slip-decorated jar (rim). Fabric 7; Technique = handmade; slip painted = undecorated/red2, grey2.

Comparanda: Irāq al-Amīr (Dentzer *et al.*, 1983: fig. 64.36).

2. A.155

Slip-decorated jar (rim). Fabric 2; Technique = handmade; slip painted = undecorated/grey2.

Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl. 52.8); Khirbat Fāris (Johns and McQuitty, 1989: fig. 25.34); Southern Ghawr, Khirbat Shaykh ʿĪsā (MacDonald, 1992: pl. 31.g); Tal Abū Qaʿdān, phase S (Franken and Kalsbeek, 1975: fig. 71.18); and Tal Saylūn (Andersen, 1985: pl. 8.115).

3. A.152

Slip-decorated jar (rim). Fabric 2; Technique = handmade; slip painted = undecorated/grey1.

Comments: Remains of filter in neck.

Comparanda: painting style: Abū Ghawsh (De Vaux and Steve, 1950: pl. F.17).

4. A.151

Slip-decorated jar (rim). Fabric 7; Technique = handmade; slip painted = undecorated/red2, grey2.

Comparanda: Edom region (Hart and Falkner, 1985: fig. 5.30).

5. A.164

Slip-decorated jar (neck). Fabric 4; Technique = handmade; slip painted = undecorated/grey2.

Comparanda: Dhibān (Winnett and Reed, 1964: pls. 64.9; 67.14); Khirbat Fāris (McQuitty and Falkner, 1993: figs. 19.15; 20.30); Naḥal Yattir region (Govrin, 1991: site 68, fig. 2.15); and Southern Ghawr, Rujūm (MacDonald, 1992: pl. 34.c).

6. A.178

Slip-decorated jug (rim). Fabric 6; Technique = handmade; slip painted = undecorated/grey2.

Comments: Single handle and filter in neck.

7. A.124

Slip-decorated jug (rim). Fabric 2; Technique = handmade; slip painted = buff2, red2, grey2.

Comments: Filter in neck. Painted on the interior of the rim. Similar painting style seen on A.211 and A.213.

Comparanda: Karak plateau (Miller, 1991: fig. 473); Southern Ghawr, Rujūm (MacDonald, 1992: pl.34.g); Tal Nimrīn (Flanagan *et al.*, 1994: fig. 17.1); and Wu'ayra (Vannini *et al.*, 1995: fig. 20.4).

8. A.241

Slip-decorated jar (rim). Fabric 12; Technique = handmade; slip painted = undecorated/buff2, brown2.

Comments: One handle visible on exterior. Painting around interior of rim:.

Comparanda: Southern Ghawr, Rujūm (MacDonald, 1992: pl. 34.a). Painting style: Jerusalem, Damascus Gate (Wightman, 1989: pl. 53.2, 3).

9. A.153

Slip-decorated jug (rim). Fabric 7; Technique = handmade; slip painted = undecorated/grey2.

Comments: Plastered around the interior of the rim.

Comparanda: Southern Ghawr, Rujūm (MacDonald, 1992: pl. 34.d).

10. A.213

Slip-decorated jar (rim). Fabric 2; Technique = handmade; slip painted = red1, grey2.

Comparanda: Tal Abū Qa'dān, phase Q (Franken and Kalsbeek, 1975: fig. 67.5).

11. A.211

Slip-decorated jar (rim). Fabric 11; Technique = handmade; slip painted = undecorated/red1, grey2.

Comparanda: Tal Abū Qa'dān, phase M (Franken and Kalsbeek, 1975: fig. 62.46).

12. A.169

Slip-decorated jug (neck). Fabric 2; Technique = handmade; slip painted = undecorated/red1, grey1.

Comments: Filter in neck and two handles on the exterior.

13. A.168

Slip-decorated jug (neck). Fabric 7; Technique = handmade; slip painted = undecorated/grey2.

Comments: Filter in neck and no handles on exterior.

Comparanda: painting style: Southern Ghawr, Rujūm (MacDonald, 1992: pl. 34.l).

14. A.170

Slip-decorated jug (neck). Fabric 3; Technique = handmade; slip painted = undecorated/grey2.

Comments: Filter in neck and two handles.

15. A.215

Slip-decorated jug (neck). Fabric 2; Technique = handmade; slip painted = undecorated/grey2.

Comments: Filter in neck and no handles visible on exterior.

16. A.162

Slip-decorated jug (shoulder). Fabric 2; Technique = handmade; slip painted = undecorated/grey2.

Comparanda: Sabastīyya (Crowfoot *et al.*, 1957: fig. 84a.9).

Catalogue page 4. Handmade wares with slip-painting**1. A.157**

Slip-decorated bowl (base). Fabric 13; Technique = handmade; slip painted = undecorated/grey2.

Comments: Similar to A.35. Plastered on interior.

Comparanda: Burj al-Aḥmar, phase D1 (Pringle, 1986: fig. 43.9).

2. A.161

Slip-decorated jug (base). Fabric 2; Technique = handmade; slip painted = undecorated/grey2.

Comparanda: Tal Abū Qa'dān, phases H–J (Franken and Kalsbeek, 1975: fig. 53.28).

3. A.158

Slip-decorated jug (base). Fabric 7; Technique = handmade; slip painted = undecorated/grey2.

4. A.160

Slip-decorated (base). Fabric 2; Technique = handmade; slip painted = undecorated/grey2.

Comparanda: Negev, Tal Jimna (Schaefer, 1989: fig. 9.9); and Tal Abū Qa'dān, phases H–J (Franken and Kalsbeek, 1975: fig. 55.44).

5. E.5508

Slip-decorated (base). Fabric 9; Technique = handmade; slip painted = undecorated/grey1.

Comments: Closed vessel shape.

Comparanda: Tal Abū Qa'dān, phase O (Franken and Kalsbeek, 1975: fig. 65.37, 38).

6. A.159

Slip-decorated (base). Fabric 14; Technique = handmade; slip painted = undecorated/brown1.

Comments: Part of a zoomorphic vessel?

7. A.214

Slip-decorated (handle). Fabric 2; Technique = handmade; slip painted = grey2.

Comparanda: Tal Abū Qa'dān, phase R (Franken and Kalsbeek, 1975: fig. 70.18); and Wādī al-Ḥasā (MacDonald, 1988: pl. 22.9).

8. A.176

Slip-decorated (handle). Fabric 6; Technique = handmade; slip painted = grey2.

Comparanda: Dhibān (Tushingham, 1972: fig. 8.32); Quşayr Qadīm (Whitcomb and Johnson, 1979: pl. 50.n); Southern Ghawr, Khirbat Shaykh 'Īsā (MacDonald, 1992: pl. 31.i); and Tal Saylūn (Andersen, 1985: pl. 9.122).

9. A.177

Slip-decorated (handle). Fabric 14; Technique = handmade; slip painted = buff2, grey2.

Comments: Buff slip has been used over entire exterior surface.

Comparanda: Tal Abū Qa'dān, phases K, O (Franken and Kalsbeek, 1975: figs. 59.39; 65.35).

10. F.5528

Slip-decorated (handle). Fabric 15; Technique = handmade; slip painted = buff1, red4.

Comparanda: Tal Abū Qa'dān, phase O (Franken and Kalsbeek, 1975: fig. 65.32).

11. A.173

Slip-decorated (base). Fabric 7; Technique = handmade; slip painted = red1, grey1.

Comments: Four(?) footed vessel. One handle visible on exterior. Decorated on interior and exterior. Part of a zoomorphic vessel?

Comparanda: Tal Abū Qa'dān, phase S (Franken and Kalsbeek, 1975: fig. 71.30).

12. A.243

Slip-decorated (spout). Fabric 7; Technique = handmade; slip painted = undecorated/buff2, grey2.

Comments: Buff slip has been painted over entire exterior surface.

Comparanda: Southern Ghawr; Khirbat Shaykh 'Īsā (MacDonald, 1992: pl. 31.q).

13. A.216

Slip-decorated (spout). Fabric 2; Technique = handmade; slip painted = undecorated/red1, grey2.

14. A.271

Slip-decorated. Fabric 7; Technique = handmade; slip painted = undecorated/red1.

Comments: Section of a water pipe?

15. A.233

Slip-decorated (body). Fabric 15; Technique = handmade; slip painted = undecorated/red2, grey2.

Comments: Evenly-fired shard with few organic inclusions.

16. A.244

Slip-decorated (body). Fabric 8; Technique = handmade; slip painted = undecorated/buff3, brown2.

Comments: Buff slip used over entire exterior surface.

Catalogue page 5. Unglazed wheelthrown wares: basins**1. A.245**

Unglazed basin (complete profile). Fabric 18; Technique = coiled/wheelthrown.

Comments: Interior surface has been scored with a sharp tool prior to firing. Interior surface is plastered. Splashes of plaster on the exterior. A.246–A.251 are shards of a similar type.

2. A.252

Unglazed basin (complete profile). Fabric 18; Technique = coiled/wheelthrown.
Comparanda: Negev, Tal Jimna (Schaefer, 1989: fig. 5.7).

3. A.289

Unglazed basin (rim). Fabric 18; Technique = coiled/wheelthrown.

4. A.259

Unglazed basin (rim). Fabric 18; Technique = coiled/wheelthrown.
Comparanda: Qubayba (Bagatti, 1947: fig. 30.8).

Catalogue page 6. Unglazed wheelthrown wares: basins**1. A.263**

Unglazed basin (rim). Fabric 25; Technique = coiled/wheelthrown.
Comparanda: Negev, Tal Jimna (Schaefer, 1989: fig. 5.16).

2. A.286

Unglazed basin (rim). Fabric 18; Technique = coiled/wheelthrown.
Comparanda: Negev, Tal Jimna (Schaefer, 1989: fig. 5.3).

3. A.255

Unglazed basin (rim). Fabric—; 19 Technique = coiled/wheelthrown. Comments: Combed patterns on exterior.
Comparanda: Karak (Brown, 1989: fig. 27.31); and Negev, Tal Jimna (Schaefer, 1989: fig. 5.10).

Catalogue page 7. Unglazed wheelthrown wares: basins and storage jars**1. A.315**

Unglazed basin (rim). Fabric 19; Technique = coiled/wheelthrown.
Comments: Perhaps self-slipped. Combed patterns on exterior.
Comparanda: Khalil (Bennett, 1972: pl. III: II.A.4). Similar incised decoration: Southern Ghawr, Fayfā' (MacDonald, 1992: pl. 30.p).

2. B.4556

Unglazed storage jar (rim). Fabric 19; Technique = coiled/wheelthrown.

3. A.3422

Unglazed storage jar (rim). Fabric 45; Technique = coiled/wheelthrown.
Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl. 57.3); Karak (Brown, 1989: fig. 7.28); and Shawbak (Brown, 1988: fig. 13.46).

4. A.3423

Unglazed storage jar (rim). Fabric 45; Technique = coiled/wheelthrown.

5. A.262

Unglazed storage jar (rim). Fabric 25; Technique = coiled/wheelthrown.

6. F.5579

Unglazed storage jar (rim). Fabric 18; Technique = coiled/wheelthrown.
Comparanda: Karak (Brown, 1989: fig. 7.29).

7. F.5600

Unglazed storage jar (rim). Fabric 19; Technique = coiled/wheelthrown. Comments: Double band of finger impressions on exterior below rim.
Comparanda: Khalil (Bennett, 1972: pl. IV: II.A.43); and Negev, Tal Jimna

(Schaefer, 1989: fig. 4.36). For similar bands of thumb impressions: Thāniyya (Brown, 1992: pp. 410–1, pl. 12.2).

Catalogue page 8. Unglazed wheelthrown wares: storage jars

1. A.3405

Unglazed storage jar (rim). Fabric 24; Technique = coiled/wheelthrown. Comments: Plastered on exterior. Painted (with bitumen?) on interior. Several handles attached to the shoulder although the number on the original vessel is unclear. Raised ridge at the transition of the neck and shoulder decorated with repeated finger impressions. Incised patterns on the exterior of the body. Remains of an inscription on the shoulder reading: “*amal al-ḥāl... (?)*” A.3406 is a rim from the same vessel and A.3407–A.3421 are body shards from the same vessel type.

Comparanda: Khirbat al-Āl (Reed, 1972: figs. 3.4; 8.224, 224a).

Catalogue page 9. Unglazed wheelthrown wares: storage jars

1. A.3431

Unglazed storage jar (rim). Fabric 30; Technique = coiled/wheelthrown.

2. A.3432

Unglazed storage jar (rim). Fabric 45; Technique = coiled/wheelthrown. Comments: Signs of plastering on the interior.

3. A.3426

Unglazed storage jar (rim). Fabric 45; Technique = coiled/wheelthrown. Comparanda: Southern Ghawr, Rujūm (MacDonald, 1992: pl. 33.j).

4. A.274

Unglazed storage jar (rim). Fabric 18; Technique = coiled/wheelthrown.

5. A.325

Unglazed (rim). Fabric 19; Technique = coiled/wheelthrown.

Comments: Combed pattern on exterior.

6. A.258

Unglazed basin (rim). Fabric 18; Technique = wheelthrown.

Comments: Combed pattern on exterior.

7. A.3471

Unglazed basin (rim). Fabric 18; Technique = coiled/wheelthrown.

Comparanda: Negev, Tal Jimna (Schaefer, 1989: fig. 5.7).

8. A.327

Unglazed (rim). Fabric 18; Technique = coiled/wheelthrown.

9. A.3306

Unglazed (rim). Fabric 31; Technique = coiled.

Comments: Possibly part of a syrup container.

Comparanda: Karak plateau (Miller, 1991: fig. 446).

10. A.331

Unglazed (body). Fabric 19; Technique = coiled/wheelthrown.

Comments: Deeply incised decorative band on exterior.

11. F.5586

Unglazed (base). Fabric 18; Technique = wheelthrown.

Comments: Possibly part of a platter or stand for another vessel.

12. A.294

Unglazed basin (base). Fabric 18; Technique = coiled/wheelthrown.

Comments: Deeply incised combed pattern on exterior. Bottom section of the base has sheared off during firing.

Catalogue page 10. Wheelthrown unglazed wares: basins and sugar pots

1. A.283

Unglazed sugar pot? (rim). Fabric 18; Technique = coiled/wheelthrown.

2. A.282

Unglazed sugar pot (rim). Fabric 5; Technique = coiled/wheelthrown.

Comments: Type SP I/A/02 at Tal Abū Ṣarbūt (LaGro and De Haas, 1989–90).

Comparanda: Khalīl (Bennett, 1972: pl. V: II.B.11); Tal Abū Qa'dān, phase M (Franken and Kalsbeek, 1975: fig. 43.28); and Tal Fandī (Kareem, 1989: fig. 4.9).

3. A.3468

Unglazed sugar pot? (rim). Fabric 18; Technique = coiled/wheelthrown.

4. E.5574

Unglazed (rim/spout). Fabric 20; Technique = coiled.

Comments: Hole bored below the spout prior to firing. Patches of plaster on the exterior. Possibly Byzantine?

5. A.3384

Unglazed sugar pot (complete profile). Fabric 28; Technique = coiled/wheelthrown.

Comments: Type SP I/A/07 at Tal Abū Ṣarbūt (LaGro and De Haas, 1989–90).

Comparanda: Tal Abū Qa'dān, phase Q (Franken and Kalsbeek, 1975: fig. 45.5); and Tal Fandī (Kareem, 1989: fig. 5.6).

6. A.3363

Unglazed sugar pot (rim). Fabric 44; Technique = coiled/wheelthrown.

Comments: Type SP I/A/05 at Tal Abū Ṣarbūt (LaGro and De Haas, 1989–90).

Comparanda: Gazit region (Gal, 1991: site 61, fig. 1.1); Jarash (Tholbecq, 2000: pl. VII.55); Southern Ghawr, Ṭawāḥīn al-Sukkar and Khirbat Shaykh ʿĪsā (MacDonald, 1992: pls. 29.m; 31.b); Ṭabaqat Faḥl (McNicol *et al.*, 1992: pl. 125.3); Tal Abū Qa'dān, phase K (Franken and Kalsbeek, 1975: fig. 42.28); Tal Fandī (Kareem, 1989: fig. 5.7); and Wādī al-Yābis (Mabry and Palumbo, 1988: fig. 14.96).

7. A.796

Unglazed sugar pot (rim) Fabric 28; Technique = coiled/wheelthrown.

Comments: Type SP I/A/40 at Tal Abū Ṣarbūt (LaGro and De Haas, 1989–90).

8. A.273

Unglazed sugar pot (rim). Fabric 18; Technique = coiled/wheelthrown.

Comments: Type SP I/A/05 at Tal Abū Ṣarbūt (LaGro and De Haas, 1989–90).

Comparanda: Gazit region (Gal, 1991: site 13, fig. 1.6).

9. A.668

Unglazed sugar pot (rim). Type 668; Fabric 28; Technique = coiled/wheelthrown.

Comments: Type SP I/A/02 at Tal Abū Ṣarbūṭ (LaGro and De Haas, 1989–90).

Comparanda: Daliya region (Olami, 1981: site 71, fig. 1.1); Tal Abū Qa'dān, phase H (Franken and Kalsbeek, 1975: fig. 42.14); Tal Fandī (Kareem, 1989: fig. 5.12); and Wādī 'Isal (Jacobs, 1983: fig. 15.h).

Catalogue page 11. Unglazed wheelthrown wares: sugar pots**1. A.326**

Unglazed (rim). Fabric 20; Technique = wheelthrown.

2. A.257

Unglazed basin (rim). Fabric 19; Technique = wheelthrown.

Comparanda: Khalīl (Bennett, 1972: pl. III: II.A.4); Southern Ghawr, Rujūm (MacDonald, 1992: pl. 33.j).

3. A.1283

Unglazed sugar pot (rim). Fabric 30; Technique = coiled/wheelthrown.

Comparanda: Khalīl (Bennett, 1972: pls. IV: II.A.34; and III: II.A.18).

4. A.3358

Unglazed sugar pot (rim). Fabric 18; Technique = coiled/wheelthrown.

Comparanda: Khalīl (Bennett, 1972: pls. IV: II.A.34; and III: II.A.18).

5. A.798

Unglazed sugar pot (rim). Fabric 31; Technique = coiled/wheelthrown.

Comments: Type SP I/A/11 or 21 at Tal Abū Ṣarbūṭ (LaGro and De Haas, 1989–90).

Comparanda: Dhibān (Winnett and Reed, 1964: pl. 65.1); Southern Ghawr, Ṭawāḥīn al-Sukkar and Khirbat Shaykh 'Isā (MacDonald, 1992: pls. 29.1; 31.c); and Tal Abū Qa'dān, phase K (Franken and Kalsbeek, 1975: fig. 42.25).

6. A.717

Unglazed sugar pot (rim). Technique = coiled/wheelthrown.

Comments: Type SP I/A/08 at Tal Abū Ṣarbūṭ (LaGro and De Haas, 1989–90).

Comparanda: Tabgha (Loffreda, 1970: fig. 44.12–3); Tal Abū Qa'dān, phase P (Franken and Kalsbeek, 1975: fig. 44.31); and Tal Fandī (Kareem, 1989: fig. 5.8).

7. A.789

Unglazed sugar pot (rim). Fabric 31; Technique = coiled/wheelthrown.

Comments: Type SP I/A/05 at Tal Abū Ṣarbūṭ (LaGro and De Haas, 1989–90).

Comparanda: Tal Abū Qa'dān, phase H (Franken and Kalsbeek, 1975: fig. 42.12); Tal Fandī (Kareem, 1989: fig. 5.19); and Wādī al-Yābis (Mabry and Palumbo, 1988: fig. 14.97).

8. A.782

Unglazed sugar pot (rim). Fabric 28; Technique = coiled/wheelthrown.

Comments: Type SP I/A/40 at Tal Abū Ṣarbūṭ (LaGro and De Haas, 1989–90).

Comparanda: Gazit region (Gal, 1991: site 40, fig. 3.1); Southern Ghawr, Khirbat Shaykh ʿĪsā (MacDonald, 1992: pl. 31.c); and Tal Fandī (Kareem, figs. 4.3; 5.2).

9. A.1286

Unglazed sugar pot? (rim). Fabric 28; Technique = coiled/wheelthrown.

Comments: Type SP I/A/11 or 21 at Tal Abū Ṣarbūt (LaGro and De Haas, 1989–90). Similar profile, scale and well levigated fabric found in a monochrome lead-glazed vessel from Karak (A.3693).

Catalogue page 12. Unglazed wheelthrown wares: syrup jars and drainpipes

1. A.3303

Unglazed syrup container (rim). Fabric 30; Technique = coiled.

Comparanda: Tal Abū Qaʿdān, phase H (Franken and Kalsbeek, 1975: fig. 42.19); Tal Nimrīn (Dornemann, 1990: fig. 1.21; Flanagan *et al.*, 1994: fig. 17.5); Wādī ʿIsal (Jacobs, 1983: fig. 15.a); and Wādī al-Yābis (Mabry and Palumbo, 1988: fig. 14.10).

2. A.1099

Unglazed syrup container (rim). Fabric 31; Technique = coiled

Comparanda: Karak (Brown, 1989: fig. 6.15); Ṭabaqat Faḥl (Smith, 1973: pl. 70.907; McNicoll *et al.*, 1992: pl. 125.1); Tal Abū Qaʿdān, phase M (Franken and Kalsbeek, 1975: fig. 43.25); Southern Ghawr, Khānzīra (Rast and Schaub, 1974: fig. 12.330); Southern Ghawr, Ṭawāḥīm al-Sukkar and Rujūm (MacDonald, 1992: pls. 29.q; 33.a); and Wādī ʿIsal (Jacobs, 1983: fig. 15.d).

3. A.1127

Unglazed syrup container? (rim). Fabric 31; Technique = coiled.

Comparanda: Dhibān (Winnett and Reed, 1964: pl. 65.14); Mughārat al-Warda (Coughenour, 1976: pl. XXXII.1 LH bottom corner); Southern Ghawr, Ṭawāḥīm al-Sukkar (MacDonald, 1992: pl. 29.s); Ṭabaqat Faḥl (Smith 1973: pl. 70.915; McNicoll *et al.*, 1992: pl. 125.2); and Tal Abū Qaʿdān, phase P (Franken and Kalsbeek, 1975: fig. 44.45).

4. A.1124

Unglazed syrup container? (rim). Fabric 28; Technique = wheelthrown.

Comparanda: Gazit region (Gal, 1991: site 15, fig. 1.2); Southern Ghawr, Khirbat Shaykh ʿĪsā (MacDonald, 1992: pl. 31.v); Tal Abū Qaʿdān, phase M (Franken and Kalsbeek, 1975: fig. 43.24); and Wādī ʿIsal (Jacobs, 1983: fig. 15.c).

5. A.276

Unglazed drainpipe? (rim). Fabric 19; Technique = wheelthrown.

6. A.3116

Unglazed (rim). Fabric 24; Technique = wheelthrown.

Comparanda: Gazit region (Gal, 1991: site 61, fig. 3.6).

7. A.617

Unglazed drainpipe (complete profile). Fabric 28; Technique = wheelthrown.

8. A.581

Unglazed drainpipe (complete profile). Fabric 27; Technique = wheelthrown. Comparanda: Ba'albak, 'Arab tower' (Sarre, 1925: p. 95, fig. 105); Tal Saylūn, Byzantine contexts (Andersen, 1985: pl. 12.196, 197).

9. A.3096

Unglazed (rim). Fabric 19; Technique = wheelthrown. Comments: Small hole bored into body prior to firing.

10. A.1433

Unglazed pipe (body). Fabric 30; Technique = wheelthrown.

Catalogue page 13. Unglazed wheelthrown wares: drainpipes, jugs, jars, lids

1. A.3437

Unglazed drainpipe? (rim). Fabric 26; Technique = wheelthrown.

2. A.275

Unglazed pipe (rim). Fabric 20; Technique = wheelthrown. Comments: Perhaps a junction section.

3. A.3097

Unglazed (rim). Fabric 42; Technique = wheelthrown.

4. A.1263

Unglazed stand? (complete profile). Fabric 27; Technique = wheelthrown.

5. A.1287

Unglazed jar (rim). Fabric 32; Technique = wheelthrown. Comments: Probably a two-handled vessel.

Comparanda: Dhibān (Tushingam, 1972: fig. 8.34); Jerusalem, Damascus Gate (Wightman, 1989: pl. 65.8); Karak assemblage (A.3744, cat. page 28); Khalīl (Bennett, 1972: pl. VIII: IV.K); and Ramla (Kaplan, 1959: fig. 3A.13).

6. A.3099

Unglazed jar (rim). Fabric 27; Technique = wheelthrown.

7. A.1380

Unglazed jar (rim). Fabric 28; Technique = wheelthrown.

8. A.3100

Unglazed (rim). Fabric 40; Technique = wheelthrown.

9. A.1378

Unglazed jar (rim). Fabric 28; Technique = wheelthrown. Comparanda: Gazit region (Gal, 1991: site 61, fig. 3.2).

10. A.3113

Unglazed (rim). Fabric 24; Technique = wheelthrown.

11. A.1361

Unglazed (rim). Fabric 28; Technique = wheelthrown. Comparanda: Southern Ghawr, Khirbat Shaykh ʿĪsā (MacDonald, 1992: pl. 31.p)

12. C.4705

Unglazed (rim). Fabric 30; Technique = wheelthrown. Comments: burnished on exterior prior to firing.

Comparanda: 'Athlith region (Ronen and Olami, 1978: site 82, fig. 19.15).

13. F.5980

Unglazed (rim). Fabric 35; Technique = wheelthrown.

Comments: Roman-Byzantine type? Burnished on exterior prior to firing.

14. A.1362

Unglazed (rim). Fabric 28; Technique = wheelthrown.

Comments: burnished on exterior prior to firing.

15. F.6035

Unglazed bowl (rim). Fabric 39; Technique = wheelthrown.

Comments: Red slip applied on exterior. Roman-Byzantine type?

16. F.6049

Unglazed pitcher (rim). Fabric 41; Technique = wheelthrown.

Comments: No handle or filter.

Comparanda: Dayr Mar Saba region (Patrich, 1994: site 47, fig. 1).

17. A.3064

Unglazed pitcher (neck). Fabric 40; Technique = wheelthrown.

Comments: No handles.

Comparanda: Ma'anit region (Ne'eman, 1990: site 33, fig. 1.10).

18. A.1358

Unglazed pitcher (rim). Fabric 33; Technique = wheelthrown.

Comments: One handle and no filter.

Comparanda: Abū Ghawsh (De Vaux and Steve, 1950: pl. G.36); Jerusalem, Armenian Garden, 'Ayyubid' phase (Tushingham, 1985: fig. 39.22); Jerusalem, Damascus Gate (Wightman, 1989: pl. 59.6); and Jerusalem, Zion Gate (Broshi and Tsafir, 1977: fig. 4.8).

19. A.1365

Unglazed (rim). Fabric 28; Technique = wheelthrown.

20. A.1359

Unglazed pitcher (rim). Fabric 32; Technique = wheelthrown.

Comparanda: Jerusalem, Armenian Garden, 'Ayyubid' phase (Tushingham, 1985: fig. 35.39).

21. F.5656

Unglazed (rim). Fabric 25; Technique = wheelthrown.

Comparanda: Abū Ghawsh (De Vaux and Steve, 1950: pl. G.33); Jerusalem, Armenian Garden, 'Ayyubid' phase (Tushingham, 1985: fig. 40.26); Jerusalem, Damascus Gate (Wightman, 1989: pl. 60.1); and Karak (Brown, 1989: fig. 6.12).

22. A.1357

Unglazed pitcher (rim). Fabric 28; Technique = wheelthrown.

Comments: One handle and no filter.

23. A.1372

Unglazed pitcher (rim). Fabric 21; Technique = wheelthrown.

Comments: Two handles and no filter.

Comparanda: Ḥamā (Riis and Poulsen, 1957: fig. 995); and Tabgha (Loffreda, 1970: fig. 43.100).

24. A.1434

Unglazed pipe. Fabric 31; Technique = wheelthrown.

25. F.6007

Unglazed lid? (rim). Fabric 37; Technique = wheelthrown.

26. F.5983

Unglazed lid (complete profile). Fabric 37; Technique = wheelthrown.

27. F.5914

Unglazed lid? (rim). Fabric 30; Technique = wheelthrown.

28. F.6113

Unglazed lid (body). Fabric 45; Technique=wheelthrown.

Catalogue page 14. Unglazed wheelthrown wares: jugs, jars and bowls

1. A.1292

Unglazed pitcher (rim). Fabric 28; Technique = wheelthrown.

Comments: One handle and no filter.

Comparanda: Abū Ghawsh (De Vaux and Steve, 1950: pl.G.32); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: figs. 41.37; 42.13); and Jerusalem, Damascus Gate (Wightman, 1989: pl. 59.6).

2. A.1288

Unglazed pitcher (rim). Fabric 28; Technique = wheelthrown.

Comments: One handle and no filter.

Comparanda: Ḥamā (Riis and Poulsen, 1957: figs. 836 [lead glazed over the upper section], 994); and Tal al-Ḥasī (Toombs, 1985: pl. 83.1, 2 [two handles]; Eakins, 1993: pl. 110 [two handles]).

3. A.1344

Unglazed pitcher (rim). Fabric 30; Technique = wheelthrown.

Comments: One handle and no filter.

Comparanda: 'Ayzariyya (Saller, 1957: pl. 117.6).

4. A.3065

Unglazed pitcher (neck). Fabric 41; Technique = wheelthrown.

Comments: No handles and repeated bands of gouged decoration.

Comparanda: Har Ḥamran region, sites 260 and 269 (Haiman, 1993: p. 17).

5. A.1291

Unglazed pitcher (rim). Fabric 28; Technique = wheelthrown.

Comments: One handle and no filter.

Comparanda: Nāšira (Bagatti, 1971: fig. 21.4); and Tal al-Ḥasī (Toombs, 1985: pl. 83.4).

6. A.3063

Unglazed pitcher (neck). Fabric 31; Technique = wheelthrown.

Comparanda: Ḥamā (Riis and Poulsen, 1957: figs. 990, 993); Jerusalem, Damascus Gate (Wightman, 1989: pl. 59.6) and Khalīl (Bennett, 1972: pl. X: V.G.2).

7. A.1370

Unglazed pitcher (neck). Fabric 28; Technique = wheelthrown.

Comments: One handle and no filter.

Comparanda: Qubayba (Bagatti, 1947: fig. 28.2, 3); and Quṣayr Qadīm (Whitcomb and Johnson, 1982: pl. 39.c).

8. A.1368

Unglazed pitcher (neck). Fabric 28; Technique = wheelthrown.

Comments: No handles. Filter in neck.

Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl. 59.16).

9. A.3057

Unglazed pitcher (neck). Fabric 28; Technique = wheelthrown.

Comments: No filter in neck.

Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl. 59.10); Qubayba (Bagatti, 1947: fig. 28.4, 5); and Sāṭāf (Gibson *et al.*, 1991: fig. 23.3 [two handles]).

10. A.3117

Unglazed (neck). Fabric 30; Technique = wheelthrown.

11. A.1392

Unglazed jug (neck). Fabric 28; Technique = wheelthrown.

Comments: As A.1386 but with different filter design.

Comparanda: spout design: 'Ayzariyya (Saller, 1957: fig. 63.5609, 5611).

12. A.1384

Unglazed pitcher (neck). Fabric 27; Technique = wheelthrown.

Comments: Two handles and filter in neck.

13. A.3061

Unglazed pitcher (neck). Fabric 39; Technique = wheelthrown.

Comments: Two handles and filter in neck.

Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl. 61.3)

14. A.3062

Unglazed pitcher (neck). Fabric 39; Technique = wheelthrown.

Comments: No handles visible. Filter in neck. Incised and pin-pricked decoration on exterior.

Comparanda: Tal Abū Qa'dān (Franken and Kalsbeek, 1975: fig. 30.2).

15. A.1387

Unglazed pitcher (neck). Fabric 32; Technique = wheelthrown.

Comments: Similar to A.1386 but with a different filter design.

Comparanda: Damascus (al-'Ush, 1961–2: fig. 5.34); Ḥamā (Riis and Poulsen, 1957: figs. 943, 965); and Jerusalem, Armenian Garden, 'Ayyubid' phase (Tushingham, 1985: fig. 39.2,4).

16. A.3060

Unglazed pitcher (neck). Fabric 39; Technique = wheelthrown.

Comments: Two handles and no filter. Thin incised and pin-pricked decoration on exterior. Bands of decoration are similar to the 'panel style' on blue and black stonepaste wares (e.g. A.4473). The application of the dotted and incised ornament is comparable to copper and bronze objects of the Ayyubid-Mamluk period (e.g. Battista and Bagatti, 1976: pl. 28.1).

17. C.4708

Unglazed bowl (rim). Fabric 27; Technique = wheelthrown.

Comparanda: (glazed and unglazed vessels) Gazit region (Gal, 1991: site 61, fig. 3.9); Southern Ghawr, Khirbat Shaykh 'Īsā (MacDonald, 1992: pl. 32.p); Ṭabaqat Fahl (Smith, 1973: pl. 72.967); and Tal Malabiyya (Lebeau *et al.*, 1985: fig. 2.10).

Catalogue page 15. Unglazed wheelthrown wares: bowls, closed vessels and pipes**1. A.3095**

Unglazed bowl (complete profile). Fabric 25; Technique = wheelthrown.
 Comparanda: Buṣrā (Berthier, 1985: p. 31, fig. 50); Ramla (Kaplan, 1959: fig. 3B.7); and Southern Ghawr, Khirbat Shaykh ʿĪsā (MacDonald, 1992: pl. 32.v).

2. A.1264

Unglazed bowl (complete profile). Fabric 27; Technique = wheelthrown.

3. A.3102

Unglazed bowl (rim). Fabric 21; Technique = wheelthrown.

Comments: Similar profile seen in lead-glazed wares (A.3623, A.3686).

4. A.3106

Unglazed bowl (rim). Fabric 30; Technique = wheelthrown.

Comparanda: ʿAyzariyya (Saller, 1957: fig. 56, no. 5742); and Karak (Brown, 1989: fig. 5.8). A

5. A.1265

Unglazed bowl (rim). Fabric 25; Technique = wheelthrown.

Comparanda: ʿAyzariyya (Saller, 1957: fig. 42, no. 260); Gazit region (Gal, 1991: site 59, fig. 1.1); Jerusalem, Armenian Garden, ʿAyyubidʿ and ʿMamlukʿ phases (Tushingham, 1985: figs. 35.1; 41.6); Jerusalem, Damascus Gate (Wightman, 1989: pl. 55.4); Southern Ghawr, Khirbat Shaykh ʿĪsā and Rujūm (MacDonald, 1992: pls. 32.s; 34.m); and Wādī ʿArab (Hanbury-Tenison, 1984: pl. 17.8).

6. A.1276

Unglazed bowl (rim). Fabric 21; Technique = wheelthrown.

Comparanda: ʿAyzariyya (Saller, 1957: fig. 56, no. 7333)

7. A.3433

Unglazed storage jar? (rim). Fabric 32; Technique = wheelthrown.

Comparanda: Greater ʿAmmān region (Abu Dayyah *et al.*, 1991: fig. 9.13).

8. D.5059

Unglazed bowl (rim). Fabric 25; Technique = wheelthrown.

Comments: Roman-Byzantine type?

Comparanda: Abū Ghawsh (De Vaux and Steve, 1950: pl. G.14); Jerusalem, Armenian Garden, ʿMamlukʿ phase (Tushingham, 1985: fig. 41.10); and Khalīl (Bennett, 1972: pl. III: II.A.1).

9. A.3383

Unglazed (base). Fabric 32; Technique = wheelthrown.

Comments: Closed vessel shape.

Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl. 60.5); Karak (Brown, 1989: fig. 6.17); Ṣātāf (Gibson *et al.*, 1991: fig. 23.4); and Southern Ghawr, Rujūm (MacDonald, 1992: pl. 34.t).

10. C.4739

Unglazed (base). Fabric 20; Technique = wheelthrown.

Comments: Closed vessel shape.

Comparanda: Khalīl (Bennett, 1972: pl. IX: V.A.14); Southern Ghawr, Fayfāʿ (MacDonald, 1992: pl. 30.k).

11. A.3017

Unglazed (body). Fabric 27; Technique = wheelthrown.

12. A.1477

Unglazed (base). Fabric 24; Technique = wheelthrown.

Comments: Closed vessel shape.

13. A.1468

Unglazed (base). Fabric 30; Technique = wheelthrown.

Comments: Closed vessel shape.

14. A.3121

Unglazed (base). Fabric 37; Technique = wheelthrown.

Comments: Signs of misfiring.

15. C.4722

Unglazed (base). Fabric 29; Technique = wheelthrown.

Comments: Closed vessel shape.

16. A.3265

Unglazed (base). Fabric 26; Technique = wheelthrown.

Comments: Closed vessel shape. Similar profiles seen on lead-glazed wares (A.3563, A.3565).

Comparanda: Karak (Brown, 1989: fig. 6.18); Shawbak (Brown, 1988: fig. 13.36); and Southern Ghawr, Khirbat Shaykh ʿĪsā (MacDonald, 1992: pl. 31.w).

17. A.3119

Unglazed (base). Fabric 24; Technique = wheelthrown.

18. F.5623

Unglazed (base). Fabric 23; Technique = wheelthrown.

Comments: Closed vessel shape.

19. A.3223

Unglazed (base). Fabric 30; Technique = wheelthrown.

Comments: Closed vessel shape.

Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl. 60.10).

20. A.3222

Unglazed (base). Fabric 37; Technique = wheelthrown.

Comments: Closed vessel shape.

Comparanda: ʿAyzariyya (Saller, 1957: fig. 42.5752); and Dhibān (Winnett and Reed, 1964: pl. 66.16).

21. A.1477

Unglazed (base). Fabric 24; Technique = wheelthrown.

Comments: Closed vessel shape.

22. A.1472

Unglazed (base). Fabric 28; Technique = wheelthrown.

Comments: Closed vessel shape.

Comparanda: Khalīl (Bennett, 1972: pl. IX: V.B.1).

23. A.3120

Unglazed (base). Fabric 32; Technique = wheelthrown.

24. A.1470

Unglazed (base). Fabric 28; Technique = wheelthrown.

25. F.5857

Unglazed (base?). Fabric 28; Technique = wheelthrown.

26. A.1481

Unglazed (base). Fabric 36; Technique = wheelthrown.

Comments: Closed vessel shape. Exterior may be self-slipped.

Comparanda: 'Ayzariyya (Saller, 1957: fig. 42.5752); and Dhibān (Winnett and Reed, 1964: pl. 66.16).

27. A.3082

Unglazed. Fabric 32. Technique = wheelthrown.

Comments: Similar fabric and scale to A.3077. A.3083–A.3092 are similar shards.

28. A.3077

Unglazed (neck). Fabric 32; Technique = wheelthrown.

Comments: Holes have been bored through the body. All the holes have a white residue around the edges. A.3078–A.3081 have the same characteristics.

29. F.5833

Unglazed (spout). Fabric 28; Technique = wheelthrown/handmade.

Comparanda: 'Ayzariyya (Saller, 1957: pl. 117.9); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 42.9); and Jerusalem, Damascus Gate (Wightman, 1989: pl. 59.14).

Catalogue page 16. Unglazed wheelthrown wares, unglazed relief-moulded and stamped wares

1. A.292

Unglazed jar? (rim). Fabric 25; Technique = wheelthrown.

2. A.4064

Lead glazed kiln tripod. Fabric 28; Technique = hand shaped; lead glazed = green15.

3. A.3519

Unglazed pitcher (rim). Technique = wheelthrown.

Comments: Unfired shard.

Comparanda: Har Ḥamran region, sites 260 and 269 (Haiman, 1993: p. 17).

4. A.3517

Unglazed (body). Technique = wheelthrown.

Comments: Burnished on exterior. Roman-Byzantine shard.

5. A.3514

Unglazed (body). Technique = wheelthrown.

Comments: Burnished on exterior. Roman-Byzantine shard.

6. A.3209

Unglazed (neck). Fabric 30; Technique = wheelthrown.

Comments: Possibly the shank end of a tobacco pipe. Grey fabric and red slip suggests late seventeenth century or later (Robinson, 1985: p. 153).

Comparanda: Jerusalem, Damascus gate (Wightman, 1989: pl. 63: 22, 17).

7. A.4103

Relief-moulded unglazed canteen (body). Fabric 28; Technique = wheelthrown/moulded.

Comparanda: Comparable types of decoration: Damascus, Ṣālihiyya (Sauvaget, 1932: pls. 41.132, 48. 160–62); Ḥamā (Riis and Poulsen, 1957: figs. 886–7, 890–4, 896, 900–903); and Tripoli (Salamé-Sarkis, 1980: pl. LXVII.21).

8. A.4104

Relief-moulded unglazed jug (body). Fabric 55; Technique = wheelthrown/moulded.

9. A.4105

Relief-moulded unglazed jug (body) Fabric 55; Technique = wheelthrown/moulded.

10. F.7681

Relief-moulded unglazed (body). Fabric 28; Technique = wheelthrown/moulded.

Comments: Canteen fragment?

11. F.7680

Relief-moulded unglazed (body). Fabric 28; Technique = wheelthrown/moulded.

Comments: Canteen fragment?

12. A.4119

Relief-moulded unglazed jug (spout). Fabric 55; Technique = wheelthrown/moulded.

Comments: Body has the same moulded designs found on A.4103–5.

Comparanda: (raised dot pattern) Ḥamā (Riis and Poulsen, 1957: fig. 862); Raḡqa/Rāfiqa (Milwright, 2005: fig. 6.15, 17, 18).

13. A.4120

Relief-moulded unglazed (body). Fabric 26; Technique = coiled/stamped; slipped = -/buff3.

Comments: Part of a large storage vessel. Incised lines have been added to demarcate the decorative bands. Thick application of slip over stamped and incised areas. Some signs of plastering on the interior. Vessel has been evenly fired to create a hard ceramic.

Comparanda: (decorative elements) Buṣrā ‘Ayyubid’ phase (Berthier, 1985: pl. 10.129a); and Ḥamā (Riis and Poulsen, 1957: figs. 851–53).

14. A.4123

Relief-moulded unglazed (body). Fabric 18; Technique = coiled/stamped.

Comments: Design combines incised line and decorative stamps.

15. A.4122

Relief-moulded unglazed (body). Fabric 20; Technique = coiled/stamped.

Comments: Part of a large storage vessel. Incised lines have been added to demarcate the decorative band.

Comparanda: (lion/panther designs on relief-moulded unglazed vessels) Damascus, Ṣālihiyya (al-‘Ush, 1960: fig. 3.11; al-‘Ush, 1963: fig. 14.71).

16. A.4106

Unglazed lamp (base). Fabric 18; Technique = moulded.

Comments: Constructed of a porous brittle ceramic fabric. Signs of blackening around the spout. Possibly self-slipped. A very similar moulded design is found on F.7682 and A.4108.

Comparanda: Damascus, Şālihiyya (al-ʿUsh, 1961–2: fig. 8.49); and Sabastīyya (Crowfoot *et al.*, 1957: fig. 89.7). Also: Fūla (Kedar and Pringle, 1985: fig. 4.3); and Bayt Sāhūr (Tzaferis, 1975: pl. 20.7).

17. A.4107

Unglazed lamp (base). Fabric 37; Technique = moulded.

Comparanda: (zigzag design) Bayt Sāhūr (Tzaferis, 1975: pl. 20.6).

18. A.4108

Unglazed lamp (base). Fabric 39; Technique = moulded.

Comparanda: Khirbat al-Lawza (Ellenblum *et al.*, 1996: figs. 7, 8).

19. A.4109

Unglazed lamp (body). Fabric 33; Technique = moulded.

Comments: Blackened around the spout.

Comparanda: (whorl motif) Qubayba (Bagatti, 1947: pl. 28, photo. 60.7); and Tal Saylūn (Andersen, 1985: pl. 14.268B).

20. F.7683

Relief-moulded unglazed sphero-conical container (base). Fabric 58; Technique = wheelthrown/stamped.

Comments: Partially vitrified on exterior. Surface has fired red brown on interior and over cracked edges on interior. Incised lines added to stamped decoration on exterior. Type 4 (Savage-Smith, 1997). For comparanda, see chapter 6.

21. A.4124

Relief-moulded unglazed sphero-conical container (base). Fabric 58; Technique = wheelthrown/stamped.

Comments: Dark brown vitrified areas on exterior. Type 4 (Savage-Smith, 1997). For comparanda, see chapter 6.

22. F.7684

Relief-moulded unglazed sphero-conical container (body). Fabric 58; Technique = wheelthrown/stamped.

Comments: Signs of charring on exterior. Type 4 (Savage-Smith, 1997). For comparanda, see chapter 6.

23. A.4110

Unglazed tobacco pipe (shank). Fabric 56; Technique = moulded/stamped.

Comments: Burnished surface.

Comparanda: Jarash (Tholbecq, 2000: pl. XI.106, 107); Jerusalem, Damascus Gate (Wightman, 1989: pl. 63:13, 20); Tal al-Mutasallim (Schumacher, 1908: fig. 279); and Tiʿinnik (Ziadeh, 1995: fig. 1, L.296).

24. A.4111

Unglazed tobacco pipe; shank; Fabric 56; Technique = moulded/stamped.

Comments: Burnished surface.

Comparanda: As A.4110

25. A.4113

Unglazed tobacco pipe (shank). Fabric 39; Technique = moulded/stamped.

Comments: Burnished surface.

Comparanda: Corinth (Robinson, 1985: C.2, C.3, C.6–8, C.14, C.15); and Tal al-Mutasallim (Schumacher, 1908: fig. 279).

26. A.4112

Unglazed tobacco pipe (shank). Fabric 56; Technique = moulded/stamped.
Comments: Burnished.

Comparanda: As A.4110

27. A.4117

Unglazed tobacco pipe (body). Fabric 33; Technique = moulded/stamped.
Comments: Burnished surface. Broadly corresponds to types XVII, XXI (Hayes, 1980).

28. A.4114

Unglazed tobacco pipe (bowl). Fabric 40; Technique = moulded.

Comments: Burnished surface. Fabric and red slip corresponds to types V and VI (Hayes, 1980).

Comparanda: (vertical incisions on pipe bowl) Beirut (Turquety-Pariset, 1982: fig. 4.25); Şāṭāf (Gibson *et al.*, 1991: fig. 23.10); and, applied with a roulette, at Corinth (Robinson, 1985: C39–42). Also: Burj al-Aḥmar, phase E (Pringle, 1986: fig. 43.11); Ḥamā (Riis and Poulsen, 1957: fig. 1076); and Jerusalem, Damascus Gate (Wightman, 1989: pl. 63.5, 10).

29. A.4115

Unglazed tobacco pipe? (mouthpiece?). Fabric 40; Technique = wheelthrown/moulded.

Comments: Burnished but no stamped decoration. Comparable to A.3209.

Comparanda: Jerusalem, Damascus gate (Wightman, 1989: pl. 63: 22, 17).

Catalogue page 17. Plain lead-glazed wares: bowls**1.** A.3521

Lead glazed footed bowl (complete profile). Fabric 46; Technique = wheelthrown; lead glazed = ochre10/ochre1.

Comments: Thin glassy glaze with regular speckling. Base has cracked during firing. Similar profile in unglazed ware (A.1276).

Comparanda: Abū Ghawsh (De Vaux and Steve, 1950: fig. 32.6); Baysān (Fitzgerald, 1931: pl. XXXII.15); Jerusalem, Ophel (Crowfoot and Fitzgerald, 1929: pl. XVI.21); Tal Abū Qa'dān, phase K (Franken and Kalsbeek, 1975: fig. 37.11); and Tal Saylūn (Andersen, 1985: pl. 9.129).

2. A.3561

Lead glazed footed bowl (complete profile). Fabric 47; Technique = wheelthrown; slipped = buff3; lead glazed = green11.

Comments: Thin glassy glaze with occasional small intrusions. Similar tapered rim to A.3571.

Comparanda: Abū Ghawsh (De Vaux and Steve, 1950: fig. 32.3); Southern Ghawr, Rujūm (MacDonald, 1992: pl. 35.w); and Tal Abū Qa'dān, phase H (Franken and Kalsbeek, 1975: fig. 37.1).

3. A.3570

Lead glazed footed bowl (complete profile). Fabric 32; Technique = wheelthrown; slipped = buff5; lead glazed = green11.

Comments: Thin uneven glaze. Glaze has adhered poorly to ceramic surface.

4. A.3571

Lead glazed bowl (rim). Fabric 46; Technique = wheelthrown; slipped = buff5; lead glazed = green3.

Comments: Thin glassy glaze with occasional intrusions and pronounced crazing.

5. A.3572

Lead glazed bowl (rim). Fabric 30; Technique = wheelthrown; slipped = buff3; lead glazed = green9.

Comments: Thin glaze with occasional intrusions.

6. A.3722

Lead glazed bowl (rim). Fabric 32; Technique = wheelthrown; slipped = buff5; lead glazed = green13.

Comments: Glassy glaze over an uneven slip. Ceramic has blackened beneath the glaze in some areas.

Comparanda: (exterior ledge) Tripoli (Salamé-Sarkis, 1980: fig. 29.12).

7. A.3676

Lead glazed bowl (rim). Fabric 46; Technique = wheelthrown; slipped = buff4; lead glazed = ochre.

Comments: Thin uneven glaze.

Comparanda: Jerusalem, Armenian Garden (Tushingham, 1985: fig. 40.9); and Khirbat Shama' (Meyers *et al.*, 1976: pl. 7.18.9).

8. A.3696

Lead glazed bowl (rim). Fabric 46; Technique = wheelthrown; lead glazed = green13.

Comments: Thin rough glaze with regular intrusions and brown speckling.

Comparanda: Jerusalem (Avigad, 1983: fig. 302); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 40.1); Negev, Tal Jimna (Schaefer, 1989: fig. 9.30); Qubayba (Bagati, 1947: 31.9); Southern Ghawr, Fayfā' (Rast and Schaub, 1974: fig. 11.299); and Wādī 'Arab (Hanbury-Tenison, 1983: fig. 18.22).

9. F.7153

Lead glazed bowl (rim). Fabric 49; Technique = wheelthrown; slipped = buff5/undecorated; lead glazed = green14/undecorated.

Comments: Thin rough glaze.

Comparanda: 'Afūla (Dothan, 1955: fig. 7.14); Ḥasbān (Sauer, 1973: fig. 136); Jerusalem, Damascus Gate (Wightman, 1989: fig. 64.3); Khirbat Shama' (Meyers *et al.*, 1976: pl. 7.18.18); Rosh Ha-'Ayin region (Kochavi and Beit-Arieh, 1994: site 206, fig. 5); Tripoli (Salamé-Sarkis, 1980: fig. 29.6); and Wādī 'Arab (Hanbury-Tenison, 1984: fig. 19.33).

10. A.3623

Lead glazed bowl (rim). Fabric 46; Technique = wheelthrown; slipped = buff3; lead glazed = green13/undecorated.

Comments: Thin mottled glaze with regular intrusions.

Comparanda: Baysān (Fitzgerald, 1931: pl. XXXIII.30).

11. A.3643

Lead glazed bowl (rim). Fabric 28; Technique = wheelthrown; lead glazed = ochre10. Comments: Rough glaze with frequent inclusions and brown speckling.

12. A.3686

Lead glazed bowl (rim). Fabric 30; Technique = wheelthrown; slipped = buff5; lead glazed = ochre5/undecorated.

Comments: Thin rough glaze with brown speckling.

Comparanda: Jerusalem, Citadel (Johns, 1950: fig. 22.5a); Karak (Brown, 1989: fig. 5.2); and Tal Abū Qa'dān, phase M (Franken and Kalsbeek, 1975: fig. 37.60).

13. A.3694

Lead glazed bowl (rim). Fabric 31; Technique = wheelthrown; slipped = buff4; lead glazed = green14.

Comments: Thin glaze with regular intrusions.

14. A.3638

Lead glazed bowl (rim). Fabric 31; Technique = wheelthrown; slipped = buff/grey; lead glazed = ochre.

Comments: Thin glassy glaze with occasional intrusions.

Comparanda: 'Ayzariyya (Saller, 1957: fig. 55, no. 22); Jerusalem, Armenian Garden, 'Ayyubid' phase (Tushingam, 1985: fig. 38.23); Jerusalem, Damascus Gate (Wightman, 1989: pl. 69.4).

15. A.3693

Lead glazed bowl (rim). Fabric 37; Technique = wheelthrown; slipped = buff1; lead glazed = ochre10/undecorated.

Comments: Rough glaze with regular intrusions and brown speckling. Similar rim profile in unglazed wares (A.1276).

Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl. 67.6); Ma'anit region (Ne'eman, 1990: site 25, fig. 1.1); and Tal Nimrīn (Dornemann, 1990: fig. 1.13).

Catalogue page 18. Plain lead-glazed wares: bowls and pans**1. A.3715**

Lead glazed bowl (rim). Fabric 34; Technique = wheelthrown; slipped = buff5; lead glazed = ochre6.

Comments: Glassy glaze with regular intrusions and streaks of brown.

Comparanda: 'Afūla (Dothan, 1955: fig. 7.15, 6); 'Athlīth region (Ronen and Olami, 1978: site 84, fig. 2); Greater 'Ammān region (Abu Dayyah *et al.*, 1991: fig. 9.11); Ḥasbān, 'Early Mamluk' phase (Sauer, 1973: fig. 4.137); Jerusalem, Damascus Gate (Wightman, 1989: pl. 65.3, 5); Jerusalem, Zion Gate (Broshi and Tsafir, 1977: fig. 4.7); Khirbat Fāris (Johns *et al.*, 1989: fig. 27.54); Southern Ghawr, Rujūm (MacDonald, 1992: pl. 35.o, t–v); Ṭabaqat Faḥl (Smith, 1973: pl. 93.973; McNicoll *et al.*, 1992: pl. 127.3); and Tal Abū Qa'dān, phases H, J–M (Franken and Kalsbeek, 1975: figs. 37.33–40, 44–8, 50–8).

2. A.3727

Lead glazed bowl (rim). Fabric 44; Technique = wheelthrown; lead glazed = green4. Comments: Glassy glaze with regular intrusions and crazing.

Comparanda: 'Afūla (Dothan, 1955: fig. 7.8); Burj al-Aḥmar, phase F (Pringle, 1986: fig. 49.51); Damascus, Bāb Sarīja (Toucir, 1973: pl. 1.B.e); Khirbat Fāris (Johns *et al.*, 1989: fig. 26.44); Qubayba (Bagatti, 1947: fig. 31.5); and Tal Abū Qa'dān, phase L (Franken and Kalsbeek, 1975: fig. 37.15). Same profile on unglazed bowl: Jerusalem, Damascus Gate (Wightman, 1989: fig. 55.5).

3. A.3723

Lead glazed bowl (rim). Fabric 35; Technique = wheelthrown; slipped = buff3; lead glazed = green3.

Comments: Thin glassy glaze with regular intrusions.

Comparanda: see A.3727

4. A.3731

Lead glazed bowl (rim). Fabric 25; Technique = wheelthrown; slipped = buff1; lead glazed = ochre5/undecorated.

Comments: Rough glaze. Similar rim profile to A.3732

Comparanda: (rim profile) Ḥamā (Riis and Poulsen, 1957: no. 838); Ḥasbān, 'Ayyubid' phase (Sauer, 1973: fig. 135); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 41.21); and Tripoli (Salamé-Sarkis, 1980: fig. 29.5).

5. A.3734

Lead glazed frying pan (rim). Fabric 22; Technique = wheelthrown; lead glazed = ochre10/undecorated.

Comments: Thin glaze with regular intrusions. Extensive charring on the underside of the vessel.

Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl.64.1).

6. A.3706

Lead glazed bowl (rim). Fabric 30; Technique = wheelthrown; slipped = buff2; lead glazed = green14.

Comments: Thin glaze with regular intrusions.

Comparanda: Qubayba (Bagatti, 1947: fig.31.25); Southern Ghawr, Rujūm (MacDonald, 1992: fig. 35.s); Tripoli (Salamé-Sarkis, 1980: fig. 29.2); and Wādī 'Arab (Hanbury-Tenison, 1984: fig. 18.23). Also slip-painted lead-glazed bowl at Abū Ghawsh (De Vaux and Steve, 1950: fig. 32.14) and an unglazed bowl from Jerusalem, Damascus Gate (Wightman, 1989: pl. 55.4).

7. A.3711

Lead glazed bowl (rim). Fabric 27; Technique = wheelthrown; lead glazed = ochre3/undecorated.

Comments: Thin glaze with occasional green impurities. Heavily incrustated with kiln debris.

Comparanda: 'Afūla (Dothan, 1955: fig. 7.14); Qubayba (Bagatti, 1947: fig. 31.20); Nāšira (Bagatti, 1971: fig. 18.13); Tal Abū Qa'dān, phase M (Franken and Kalsbeek, 1975: fig. 37.23); and Wādī 'Arab (Hanbury-Tenison, 1984: fig. 18.21).

8. A.3713

Lead glazed bowl (rim). Type 3713; Fabric 30; Technique = wheelthrown; slipped = buff5; lead glazed = ochre6.

Comments: Glassy glaze with regular speckling.

Comparanda: Shawbak, phase III (Brown, 1988: fig. 12.28).

9. D.5315

Lead glazed bowl (rim). Fabric 37; Technique = wheelthrown; slipped = buff3; lead glazed = ochre5.

Comments: Large sand inclusions in ceramic fabric. Extensive speckling in glaze.

Comparanda: Jerusalem, Zion Gate (Broshi and Tsafir, 1977: fig. 5.2); Qubayba (Bagatti, 1947: fig. 29.22).

10. A.3672

Lead glazed bowl (rim). Fabric 29; Technique = wheelthrown; lead glazed = green.

Comments: Incised band on exterior.

11. A.3710

Lead glazed bowl (rim). Fabric 47; Technique = wheelthrown; slipped = buff2; lead glazed = green10/undecorated.

Comments: Thin rough glaze.

Comparanda: Baysān (Fitzgerald, 1931: pl. XXXIII.32); Khirbat Duḥāla (Sari, 1992: fig. 8.2); Ṭabaqat Faḥl (McNicol *et al.*, 1992: pl. 126.4); Tal Abū Qa'dān, phase Q (Franken and Kalsbeek, 1975: fig. 37.25); and Tripoli (Salamé-Sarkis, 1980: fig. 31.7).

12. A.3624

Lead glazed bowl (rim). Type 3102; Fabric 30; Technique = wheelthrown; slipped = buff3; lead glazed = green9.

Comments: Thin glassy glaze with occasional intrusions.

Comparanda: Caesarea (Pringle, 1985: fig. 3.15).

13. D.4974

Lead glazed (rim). Fabric 45; Technique = wheelthrown; slipped = buff; lead glazed = green6.

14. A.3746

Lead glazed bowl (rim). Fabric 25; Technique = wheelthrown; slipped = buff3; lead glazed = ochre1.

Comments: Glassy glaze with regular intrusions.

15. A.3732

Lead glazed bowl (rim). Fabric 37; Technique = wheelthrown; lead glazed = green15. Comments: Thin glassy glaze with occasional intrusions. Similar rim profile to A.3731

Comparanda: (rim profile) Hamā (Riis and Poulsen, 1957: no. 838); Ḥasbān, 'Ayyubid' phase (Sauer, 1973: fig. 135); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 41.21); and Tripoli (Salamé-Sarkis, 1980: fig. 29.5).

16. D.4974

Lead glazed (rim). Fabric 45; Technique = wheelthrown; slipped = buff; lead glazed = green6.

17. A.3712

Lead glazed bowl (rim). Fabric 37; Technique = wheelthrown; lead glazed = green4.

Comments: Glassy glaze with pronounced crazing.

18. A.3730

Lead glazed bowl (rim). Fabric 37; Technique = wheelthrown; lead glazed = green. Comments: Glassy glaze with regular intrusions.

Comparanda: Negev, Tal Jimna (Schaefer, 1989: fig.9.31).

19. A.3724

Lead glazed bowl (rim). Fabric 47; Technique = wheelthrown; slipped = buff3; lead glazed = green10/ochre2.

Comments: Glassy glaze over thin slip.

Comparanda: Dhibān (Tushingham, 1972: fig. 8.35); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 41.25); and Tal Abū Qa'dān, phase H (Franken and Kalsbeek, 1975: fig. 37.16).

20. A.3729

Lead glazed bowl (rim). Fabric 34; Technique = wheelthrown; slipped = buff3; lead glazed = ochre5/undecorated.

21. A.3733

Lead glazed bowl (rim). Fabric 29; Technique = wheelthrown; slipped = buff3; lead glazed = ochre1.

Comments: Glassy glaze with regular intrusions and brown impurities.

Comparanda: see A.3709

22. A.3687

Lead glazed bowl (rim). Type 3686; Fabric 37; Technique = wheelthrown; slipped = buff5; lead glazed = green3/undecorated.

23. A.3644

Lead glazed bowl (rim). Fabric 50; Technique = wheelthrown; lead glazed = ochre2.

Comments: Glassy glaze with occasional large intrusions.

Comparanda: Jerusalem, Citadel (Johns, 1950: fig. 22.5a); Karak (Brown, 1989: fig. 5.2); and Tal Abū Qa'dān, phase M (Franken and Kalsbeek, 1975: fig. 37.60).

24. A.3709

Lead glazed bowl (rim). Fabric 46; Technique = wheelthrown; slipped = undecorated/buff; lead glazed = ochre.

Comparanda: 'Afula (Dothan, 1955: fig. 7.12); Greater 'Ammān (Abu Dayyah *et al.*, 1991: fig. 9.10); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 41.27); Khirbat Fāris (Johns *et al.*, 1989: fig. 25.29); Southern Ghawr, Khirbat Shaykh 'Isā and Rujūm (MacDonald, 1992: pls. 32.n; 35.v); and Zir'īn (Grey, 1994: fig. 9.8).

Catalogue page 19. Plain lead-glazed ware: bowls and colsed vessels

1. A.3690

Lead glazed bowl (rim). Fabric 45; Technique = wheelthrown; lead glazed = green13/undecorated.

Comments: Very uneven mottled glaze with occasional large intrusions. Similar rim profile also seen on sgraffito wares from Karak (A.4071).

2. A.3639

Lead glazed bowl (rim). Fabric 30; Technique = wheelthrown; slipped = buff4; lead glazed = green3/undecorated.

Comments: Thin glaze with regular intrusions.

Comparanda: 'Ayzariyya (Saller, 1957: fig. 55, no. 7323); and Tal Abū Qa'dān, phase P (Franken and Kalsbeek, 1975: fig. 37.62).

3. A.3735

Lead glazed vase (rim). Fabric 30; Technique = wheelthrown; slipped = buff3; lead glazed = ochre11.

Comments: Glassy glaze with regular intrusions and pronounced crazing.

4. A.3737

Lead glazed (rim). Fabric 51; Technique = wheelthrown; slipped = buff3; lead glazed = green4/undecorated.

Comments: Glassy glaze over uneven surface. Unclear function.

5. A.3742

Lead glazed vase (rim). Fabric 30; Technique = wheelthrown; slipped = buff2; lead glazed = green14.

Comments: Glassy glaze with occasional intrusions and regular speckling.

6. A.3739

Lead glazed vase (rim). Fabric 37; Technique = wheelthrown; slipped = buff3; lead glazed = ochre3.

Comments: Glassy glaze with regular intrusions and brown speckling.

7. A.3744

Lead glazed handled pot (rim). Fabric 37; Technique = wheelthrown; slipped = buff2/grey1; lead glazed = green15/undecorated.

Comments: Heavily corroded glaze.

Comparanda: Jerusalem (Avigad, 1983: fig. 302); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 41.42); Jerusalem, Damascus Gate (Wightman, 1989: pl. 65.8); Khirbat Fāris (Johns *et al.*, 1989: fig. 25.36); and Ramla (Kaplan, 1959: fig. 3.A.13).

8. A.3743

Lead glazed (rim). Fabric 51; Technique = wheelthrown; slipped = buff3; lead glazed = green4/undecorated.

Comments: Glassy glaze with occasional impurities. Vessel function unclear.

9. C.4826

Lead glazed (rim). Fabric 46; Technique = wheelthrown; slipped = buff5; lead glazed = ochre3.

Comparanda: Gazit region (Gal, 1991: site 15, fig. 1.6).

10. F.7236

Lead glazed (rim). Fabric 62; Technique = wheelthrown; slipped = buff3; lead glazed = ochre4/green10.

Comments: Closed vessel shape.

11. A.3803

Lead glazed vase (shoulder). Fabric 37; Technique = wheelthrown; slipped = buff3; lead glazed = ochre5/green11.

Comments: Thick glassy glaze with pronounced crazing.

12. A.3702

Lead glazed jug (shoulder). Fabric 37; Technique = wheelthrown; slipped = buff; lead glazed = green.

Comments: Glassy glaze with occasional intrusions. Similar unglazed vessels at Karak (A.3223).

Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl. 60.10).

13. A.3806

Lead glazed (handle). Technique = wheelthrown/handmade; lead glazed = green16/undecorated.

Comments: Thin uneven glaze.

14. A.3807

Lead glazed (body). Fabric 36; Technique = wheelthrown; lead glazed = ochre2/green4.

Comments: Glassy glaze with regular intrusions. Incised wave pattern on exterior.

15. A.3808

Lead glazed (body). Fabric 46; Technique = wheelthrown; slipped = buff2; lead glazed = ochre4/undecorated.

Comments: Glassy glaze with regular brown speckling. Incised pattern on exterior.

Catalogue page 20. Plain lead-glazed ware: bowls and closed vessels

1. A.3562

Lead glazed bowl (base). Fabric 49; Technique = wheelthrown; slipped = buff3; lead glazed = green11/undecorated.

Comments: Mottled thin glaze with regular intrusions.

Comparanda: Tripoli (Salamé-Sarkis, 1980: fig. 30.25) and Wādī ‘Arab (Hanbury-Tenison, 1984: fig. 18.26).

2. A.3564

Lead glazed bowl (base). Fabric 46; Technique = wheelthrown; lead glazed = green13. Comments: Uneven glaze with regular intrusions. Some signs of misfiring.

3. A.3778

Lead glazed bowl (base). Fabric 46; Technique = wheelthrown; slipped = buff1; lead glazed = green.

Comments: Mottled thin glaze.

4. A.3783

Lead glazed bowl (base). Fabric 28; Technique = wheelthrown; lead glazed = green15.

Comments: Semi-opaque glassy glaze. Uneven and pockmarked with occasional intrusions.

Comparanda: Tal Abū Qa‘dān (Franken and Kalsbeek, 1975: fig. 37.87).

5. A.3788

Lead glazed bowl (base). Fabric 46; Technique = wheelthrown; slipped = buff5; lead glazed = green14.

Comments: Glassy mottled glaze with regular intrusions.

6. A.3800

Lead glazed (base). Fabric 28; Technique = wheelthrown; slipped = buff; lead glazed = ochre.

Comments: Glassy glaze.

Comparanda: Tripoli (Salamé-Sarkis, 1980: fig. 30.24).

7. A.3787

Lead glazed bowl (base). Fabric 37; Technique = wheelthrown; lead glazed = green14/undecorated.

Comments: Glassy glaze with occasional intrusions.

8. A.3522

Lead glazed bowl (base). Fabric 46; Technique = wheelthrown; slipped = buff3; lead glazed = green11/undecorated.

Comments: Corroded thin glaze.

Comparanda: Abū Ghawsh (De Vaux and Steve, 1950: fig. 32.10); 'Ayzariyya (Saller, 1957: fig. 55.19); Khirbat Fāris (McQuitty and Falkner, 1993: fig. 20.42); Ramla (Kaplan, 1959: fig. 3B.5); Southern Ghawr, Rujūm (MacDonald, 1992: pl. 35.w); Tal Abū Qa'dān (Franken and Kalsbeek, 1975: fig. 37.82); and Tal Rif'at region (Bernus-Taylor, 1981: fig. 248).

9. A.3782

Lead glazed bowl (base). Fabric—; Technique = wheelthrown; lead glazed = ochre12/undecorated.

Comments: Corroded glaze.

10. A.3754

Lead glazed bowl (base). Fabric 30; Technique = wheelthrown; lead glazed = green14.

Comments: Thin glaze with regular impurities.

11. A.3789

Lead glazed bowl (base). Fabric 28; Technique = wheelthrown; slipped = buff3; lead glazed = green10/undecorated.

Comments: Corroded glaze.

12. A.3784

Lead glazed bowl (base). Fabric 32; Technique = wheelthrown; lead glazed = green12/undecorated.

Comments: Semi-opaque glaze.

13. A.3751

Lead glazed bowl (base). Fabric 46; Technique = wheelthrown; slipped = buff2; lead glazed = ochre6/undecorated.

Comments: Glassy glaze with streaks of brown and green. Pronounced crazing.

14. A.3773

Lead glazed bowl (base). Fabric 46; Technique = wheelthrown; slipped = buff5; lead glazed = green3/undecorated.

Comments: Thin mottled glaze with regular intrusions.

15. A.3749

Lead glazed bowl (base). Fabric 30; Technique = wheelthrown; slipped = buff3; lead glazed = green3/undecorated.

Comments: Thin glaze with regular intrusions. Rim profile also seen on sgraffito wares at Karak (F.7669).

Comparanda: 'Ayn Shams (Fitzgerald, 1938: pl. L.17); Ḥasbān (Sauer, 1994: pl. on p. 271); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 41.32); Jerusalem, Damascus Gate (Wightman, 1989: pl. 65.7); Qubayba (Bagatti, 1947: fig. 31.32); Tal Abū Qa'dān (Franken and Kalsbeek, 1975: fig. 37.95); Tal Rif'at region (Bernus-Taylor, 1981: fig. 256); and Tripoli (Salamé-Sarkis, 1980: fig. 30.27). Also relief-moulded lead-glazed bowl Jerusalem (Avigad, 1983: fig. 302).

16. A.3753

Lead glazed bowl (base). Fabric 46; Technique = wheelthrown; lead glazed = ochre5.

Comments: Glassy glaze with occasional intrusions and impurities.

Comparanda: Abū Ghawsh (De Vaux and Steve, 1950: fig. 32.3).

17. A.3745

Lead glazed bowl (base). Fabric 36; Technique = wheelthrown; slipped = buff2; lead glazed = ochre11/undecorated.

18. A.3566

Lead glazed bowl (base). Fabric 30; Technique = wheelthrown; slipped = buff3; lead glazed = green10/undecorated.

Comments: Thin uneven glaze with frequent intrusions.

Comparanda: Ma'anit region (Ne'eman, 1990: site 55, fig. 1.13).

19. A.3752

Lead glazed bowl (base). Fabric 37; Technique = wheelthrown; slipped = buff3; lead glazed = ochre5.

Comments: Glassy glaze with regular ferrous impurities.

Comparanda: Tal Abū Qa'dān (Franken and Kalsbeek, 1975: fig. 37.92).

20. A.3523

Lead glazed (base). Fabric 31; Technique = wheelthrown; lead glazed = brown5/green3.

Comments: Thick glassy glaze.

21. A.3565

Lead glazed (base). Fabric 37; Technique = wheelthrown; slipped = buff2; lead glazed = ochre2/green11.

Comments: Thin glassy glaze with regular intrusions. Same profile seen in unglazed wares (A.3383).

Comparanda: Abū Ghawsh (De Vaux and Steve, 1950: fig. 32.15); and Ramla (Kaplan, 1959: fig. 3.B.3).

22. A.3775

Lead glazed bowl (base). Fabric 47; Technique = wheelthrown; slipped = buff3; lead glazed = ochre5/undecorated.

Comments: Rough glaze with extensive speckling.

23. A.3563

Lead glazed (base). Fabric 46; Technique = wheelthrown; slipped = buff3; lead glazed = ochre11/undecorated.

Comments: Thin glassy glaze with occasional intrusions.

Catalogue page 21. Plain lead-glazed lamps, slip-painted lead-glazed ware and sgraffito ware

1. A.4099

Lead glazed lamp (complete profile). Fabric 25; Technique = wheelthrown/hand shaped; slipped = buff3; Lead glazed = ochre2.

Comments: Thin glassy glaze with regular intrusions. Charred around spout. Type J (Kubiak, 1970).

Comparanda: 'Athlith (Johns, 1934: pl. LVII, fig. 1.c); and Ḥamā (Riis and Poulsen, 1957: fig. 1067). Also 'beehive' types: Ayla (Whitcomb, 1988b: pp. 24, 7);

Ba'albak (Sarre, 1925: p. 132, fig. 63); Ḥamā (Riis and Poulsen, 1957: figs. 1064–6); Khirbat al-Minyā (Grabar *et al.*, 1960: pl. 30.20); and Tal Malabiyya (Lebeau *et al.*, 1985: fig. 1.5).

2. A.4100

Lead glazed lamp (base). Fabric 52; Technique = wheelthrown/hand shaped; slipped = buff²; lead glazed = green¹¹.

Comments: Thin glaze with regular intrusions. Type L (Kubiak, 1970)

Comparanda: 'Athlīth (Johns, 1934: pl. LVII, fig. 1.a); 'Ayzariyya (Saller, 1957: p. 189, nos. 202, 420, 422, 5972; pl. 109.b.34); Ba'albak (Sarre, 1925: p. 132, fig. 62); Beirut, Downtown (UNESCO and AUB excavations, unpublished); Damascus (Toueir, 1973: pl. 1B.j); Jerusalem, Damascus Gate (Wightman, 1989: pl. 62.6); Qubayba (Bagatti, 1947: pl. 22, photo 48.14); Ramla (Kaplan, 1959: fig. 3A.11); Tal 'Arqa (Dentzer and Thalmann, 1973: pl. VI.3); Tal Rif'at region (Bernus-Taylor, 1981: fig. 256); and Tripoli (Salamé-Sarkis, 1980: pl. LIX.2). Unglazed lamps: Dhibān (Tushingam, 1972: fig. 8.22); Ḥamā (Riis and Poulsen, 1957: fig. 1068); Jerusalem (Avigad, 1983: fig. 300); and Qubayba (Gichon and Linden, 1984: type 8: fig. 2.f; pl. 21.f).

3. A.4101

Lead glazed lamp (base). Fabric 46; Technique = wheelthrown/hand shaped; lead glazed = ochre⁵.

Comments: Glassy glaze with occasional intrusions.

Comparanda: see A.4099

4. F.7655

Lead glazed (spout). Fabric 49; Technique = wheelthrown/hand shaped; slipped = buff; lead glazed = green.

Comments: Glaze has adhered poorly to the ceramic surface.

Comparanda: spouted *ibrīq*: Ḥamā (Riis and Poulsen, 1957: fig. 836).

5. A.4102; Reference = chapter 4.4.1.4.

Lead glazed (handle). Type 4102; Fabric 53; Technique = wheelthrown/hand moulded; lead glazed = green.

Comments: Thick glassy glaze. Handle of a lamp?

6. A.4218.

Glazed (body). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear³.

Comments: Incised details under glaze. Imitation of qingbai porcelain.

7. F.7659

Lead glaze painted bowl (rim). Fabric 37; Technique = wheelthrown; slipped = buff³; lead glazed = green⁸; Underglaze colour = brown⁴/undecorated.

Comments: Thin speckled glaze. Brown underglaze pigment may be a slip paint.

Comparanda: Jerusalem, Damascus Gate (Wightman, 1989: pl. 65.12). Also Šatāf (Gibson *et al.*, 1991: fig. 23.8).

8. A.4065

Slip-painted ware bowl (rim). Fabric 53; Technique = wheelthrown; slip painted = buff³; lead glazed = ochre⁶, green⁴.

Comments: Thin speckled glaze.

Comparanda: Burj al-Aḥmar, phase E (Pringle, 1986: fig. 50.64).

9. A.4067

Slip-painted ware bowl (complete profile). Fabric 46; Technique = wheelthrown; slip painted = buff3; lead glazed = ochre7.

Comments: Thin speckled glaze.

Comparanda: 'Ayzariyya (Saller, 1957: fig. 55, no. 7321); and Jerusalem, Damascus Gate (Wightman, 1989: pl. 66.9).

10. B.4702

Slip-painted ware bowl (rim). Fabric—; Technique = wheelthrown; slip painted = buff3; lead glazed = ochre3/undecorated.

Comparanda: Abū Ghawsh (De Vaux and Steve, 1950: fig. 32.11, 17); Jerusalem, Damascus Gate (Wightman, 1989: pl. 66.6–8); Qubayba (Bagatti, 1947: fig. 31.12); Southern Ghawr, Rujūm (MacDonald, 1992: pl. 35.n); Tal Qaymūn (Ben-Tor *et al.*, 1979: fig. 5.2); and Tal Rif 'at region (Bernus-Taylor, 1981: fig. 249).

11. A.4068

Slip-painted ware bowl (rim). Fabric 47; Technique = wheelthrown; slip painted = buff5; lead glazed = ochre6, green4.

Comments: Thin speckled glaze with regular intrusions.

12. A.4066

Slip-painted ware bowl (base). Fabric 40; Technique = wheelthrown; slip painted = buff5; lead glazed = ochre5, green4, brown4.

Comments: Thin speckled glaze.

13. A.4069

Slip-painted ware bowl (base). Fabric 53; Technique = wheelthrown; slip painted = buff3; lead glazed = ochre5, green4.

Comments: Thin speckled glaze. Signs of charring on exterior.

Comparanda: Burj al-Aḥmar, phase E (Pringle, 1986: fig. 50.66); Caesarea (Pringle, 1985: fig. 6.36); Gazit region (Gal, 1991: site 15, fig. 1.8); Ḥasbān, 'Early Mamluk' phase (Sauer, 1973: fig. 142); Ma'anit region (Ne'eman, 1990: site 55, fig. 1.5); and Tal Abū Qa'dān, phase J (Franken and Kalsbeek, 1975: fig. 38.17).

14. A.4070

Sgraffito bowl (rim). Fabric 46; Technique = wheelthrown; slipped = buff5; lead glazed = green3, ochre8/undecorated.

Comments: Thin glaze.

15. F.7667

Sgraffito bowl (rim). Fabric 49; Technique = wheelthrown; slipped = buff5; lead glazed = ochre6, green3/undecorated.

Comments: Glassy glaze with regular intrusions and crazing.

16. A.4080

Sgraffito bowl (rim). Fabric 53; Technique = wheelthrown; slipped = buff3; lead glazed = ochre7, green3/undecorated.

Comments: Thin rough glaze. Glaze has adhered poorly to the slipped surface.

Comparanda: (border design) Damascus, Bāb Sarīja (Toueir, 1973: pl. 1.d–g); Ḥayfā, St. Mary of Carmel (Pringle, 1984: fig. 8.71); and Tal al-Mutasallim (Schumacher, 1908: fig. 270a).

17. A.4077

Sgraffito bowl (rim). Fabric 53; Technique = wheelthrown; slipped = buff2; lead glazed = ochre, green/undecorated.

Comments: Thin glassy glaze with regular impurities.

18. A.4078

Sgraffito bowl (rim). Fabric 46; Technique = wheelthrown; slipped = buff3; lead glazed = ochre9, green3/undecorated.

Comments: Thin glassy glaze with regular intrusions.

19. A.4079

Sgraffito bowl (rim). Fabric 37; Technique = wheelthrown; slipped = buff3; lead glazed = green.

Comments: Thin glassy glaze with regular intrusions.

Catalogue page 22. Sgraffito wares**1. A.4076**

Sgraffito bowl (rim). Fabric 46; Technique = wheelthrown; slipped = buff5; lead glazed = green11/undecorated.

Comments: Thin glassy glaze with regular intrusions.

2. A.4074

Sgraffito bowl (rim). Fabric 53; Technique = wheelthrown; slipped = buff3; lead glazed = ochre6, green4/undecorated.

Comments: Thin glassy glaze with regular intrusions.

3. A.4071

Sgraffito bowl (rim). Fabric 52; Technique = wheelthrown; slipped = buff3; lead glazed = green3/undecorated.

Comments: Thin glaze. Holes have been drilled through the body of A.4071 and A.4072 for rewiring.

Comparanda: Caesarea (Pringle, 1985: figs. 8, 11); Jerusalem, Damascus Gate (Wightman, 1989: pl. 42.14); and Khirbat al-ʿAyadiyya (Ben-Tor, 1966: fig. 12.4). Possibly Italian: Padua (Cozza, 1987: p. 124, fig. 26.a). Also Burj al-Ahmar, phase B (Pringle, 1986: fig. 50.71); Jerusalem, Damascus Gate (Wightman, 1989: pls. 42.12; 67.5, 6; 68.1–4); and Mīnā (Lane, 1938: p. 64).

4. A.4090

Sgraffito bowl (rim). Fabric 46; Technique = wheelthrown; slipped = buff5; lead glazed = brown4.

Comments: Thin glassy glaze with regular intrusions.

5. A.4097

Sgraffito bowl (base). Fabric 51; Technique = wheelthrown; slipped = buff3; lead glazed = ochre8, green3/undecorated.

Comments: Thin glaze with regular intrusions. Blackened under glaze. Glaze has run fractured edge.

6. A.4089

Sgraffito bowl (base). Fabric 53; Technique = wheelthrown; slipped = buff; lead glazed = ochre7, green3/undecorated.

Comments: Thin glaze with regular intrusions. Blackened under glaze on interior. Hole has been drilled into base prior to firing.

Comparanda: Southern Ghawr, Fayfāʿ (MacDonald, 1992: pl. 30.c). Decoration: Ramla (Kaplan, 1959: fig. 3B.15).

7. A.4091

Sgraffito bowl (rim). Fabric 29; Technique = wheelthrown; lead glazed = ochre2/green2.

Comments: Thin glassy glaze with occasional intrusions. Unslipped.

8. F.7668

Sgraffito bowl (rim). Fabric 53; Technique = wheelthrown; slipped = buff; lead glazed = ochre1, green15/green15.

Comments: Thick glassy glaze.

Comparanda: Tal Abū Qa'dān, phase N (Franken and Kalsbeek, 1975: fig. 38.26). Possibly Italian: Padua (Cozza, 1987: p. 118, fig. 20.t).

9. A.4088

Sgraffito bowl (base). Fabric 53; Technique = wheelthrown; slipped = buff3; lead glazed = ochre2, green3/undecorated.

Comments: Thin glaze with regular intrusions.

Comparanda: Gazit region (Gal, 1991, site 57, fig. 1.5); and Negev, Tal Jimna (Schaefer, 1989: fig. 9.39).

10. A.4093

Sgraffito bowl (base). Fabric 53; Technique = wheelthrown; slipped = buff3; lead glazed = ochre8, green3/undecorated.

Comments: Thin glaze with regular intrusions. Blackened section under glaze on interior.

11. A.4092

Sgraffito bowl (base). Fabric 53; Technique = wheelthrown; slipped = buff3; lead glazed = ochre8, green3/undecorated.

Comments: Thin glaze with regular intrusions.

12. F.7670

Sgraffito bowl (base). Fabric 54; Technique = wheelthrown; slipped = buff3/undecorated; lead glazed = ochre14, ochre6, green3/undecorated.

Comments: Ceramic has slightly buckled during firing. Thick, cream slip covered in a thin glassy glaze. Deeply incised decoration.

Comparanda: (decorative features) Ferrara (Ferrari, 1990: pl. 1, figs. 84, 85, 118, 119, 141; Magnani, 1, 1981–2: pl. XXIII; Reggi, 1971: pls. 59, 60, 172, 173b, 174). Also: Damascus Museum (Meinecke-Berg, 1983: p. 245, no. 2, pl. 57.c); Fustāt (Wallis, 1891: appendix, pl. V.11); Jerusalem, Citadel (Johns, 1950: pl. LXIII.3); and Jerusalem, Damascus Gate (Wightman, 1989: pl. 67.8).

13. A.4084

Sgraffito bowl (body). Technique = wheelthrown; slipped = buff3; lead glazed = ochre6, green3/undecorated.

Comments: Thin glaze with regular intrusions. Glaze has adhered poorly to surface.

Catalogue page 23. Sgraffito and relief-moulded lead-glazed ware**1. F.7669**

Sgraffito bowl (base). Fabric 60; Technique = wheelthrown; slipped = buff5; lead glazed = green4/ochre5.

Comments: Glassy glaze with crazing. Perhaps part of a relief moulded glazed pedestal bowl?

Comparanda: Jabal Adda (Atil, 1981: no. 94); Fustāt (Scanlon, 1980: fig. 13.c, d); Jerusalem, Damascus Gate (Wightman, 1989: pl. 42.14); and Quṣayr Qadīm (Whitcomb and Johnson, 1982: pl. 35.q, r, x).

2. E.7671

Sgraffito bowl (base). Fabric 53; Technique = wheelthrown; slipped = buff/undecorated; lead glazed = ochre14, green3/undecorated.

Comments: Thick cream slip covered with a thin glassy glaze.

Comparanda: (decorative features) Ferrara (Ferrari, 1990: figs. 32, 34; Reggi, 1971: pls. 218, 223); and Venice (Saccardo, 1993: pl. 16.1–4).

3. A.4083

Sgraffito bowl (body). Fabric 54; Technique = wheelthrown; slipped = buff3/undecorated; lead glazed = ochre7, green3/undecorated.

Comments: Thin glassy glaze. Thick pale slip. Ochre glaze is very patchy and almost clear in places.

Comparanda: Fitzwilliam Museum (Poole, 1995: no. 554 [Bologna or Ferrara, *c.* 1500–30]; no. 558 [Veneto or Emilia-Romagna, *c.* 1470–1500]). Meander pattern: Ferrara (Ferrari, 1990: figs. 101, 111–2; Reggi, 1971: pls. 78, 101); Imola (Reggi, 1971: pl. 124); Bologna (Reggi, 1971: pl. 154); and Padua (Cozza, 1987: fig. 20.s). Also Baysān (Zori, 1966: pl. 10.f); Cyprus, Episkopi (du Plat Taylor, 1938: fig. 44.1); Cyprus, Nicosia (Du Plat Taylor and Megaw, 1951: pl. IX.11); Damascus Museum (Meinecke-Berg, 1983: pl. 57.c); Jerusalem, Damascus Gate (Wightman, 1989: pl. 67.7); and Tripoli (Salamé-Sarkis, 1980: pl. XLVII.9).

4. E.7672

Sgraffito juglet (body). Fabric 40; Technique = wheelthrown; slipped = undecorated/buff; lead glazed = ochre5.

Comments: Glaze and slip have adhered poorly to the ceramic surface on the exterior. Interior remains smooth and glassy.

5. A.4086

Sgraffito bowl (body). Fabric 53; Technique = wheelthrown; slipped = buff5; lead glazed = ochre7, green3/undecorated.

Comments: Thin glaze.

6. A.4132

Relief-moulded glazed bowl (rim). Fabric 60; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green3.

Comments: Glassy glaze with some crazing.

7. A.4125

Relief-moulded glazed bowl (rim). Fabric 46; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green3/ochre2.

Comments: Thin glassy glaze with frequent small intrusions.

Comparanda: (rim profile) Hasbān, 'Early Mamluk' (Sauer, 1973: figs. 139, 140); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 39.12; 41.36, 41); and Jerusalem, Damascus Gate (Wightman, 1989: pl. 64.9, 10). Also lead-glazed and slip-painted lead-glazed wares: Burj al-Aḥmar, phase E (Pringle, 1986: fig. 50.64); Dhibān (Tushingham, 1972: fig. 8.35); Jerusalem,

Armenian Garden, 'Mamluk' phase (Tushingam, 1985: fig. 41.25); and Tal Abū Qa'dān, phase H (Franken and Kalsbeek, 1975: fig. 37.16).

8. A.4127

Relief-moulded glazed bowl (rim). Fabric 47; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green10/ochre2.

Comments: Glassy glaze with pronounced crazing.

9. A.4128

Relief-moulded glazed bowl (rim). Fabric 34; Technique = wheelthrown/moulded; lead glazed = green4/ochre.

Comments: Glassy glaze with regular small intrusions.

Comparanda: (profile) Dhibān (Tushingam, 1972: fig. 8.35); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingam, 1985: fig. 41.25); and Tal Abū Qa'dān, phase H (Franken and Kalsbeek, 1975: fig. 37.16).

10. F.7693

Relief-moulded glazed bowl (rim). Fabric 62; Technique = wheelthrown/moulded; lead glazed = green4.

Comments: Glassy, slightly mottled glaze. Incised design in slip on interior. Similar type to A.4150.

Comparanda: see A.4125

11. A.4140

Relief-moulded glazed bowl (rim). Fabric 60; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green5/ochre3.

Comments: Glassy glaze. Incised design in slip on interior.

Comparanda: see A.4125

12. A.4138

Relief-moulded glazed bowl (rim). Fabric 61; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = ochre5.

Comments: Glassy glaze with occasional small intrusions.

Comparanda: see A.4125

13. A.4139

Relief-moulded glazed bowl (rim). Fabric 60; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green10/ochre5.

Comments: Glassy glaze with regular small impurities.

Comparanda: see A.4128

14. A.4161

Relief-moulded glazed bowl (rim). Fabric 60; Technique = wheelthrown/moulded; slipped = buff1; lead glazed = green4.

Comments: Glassy glaze with regular speckling.

Comparanda: see A.4125

15. A.4126

Relief-moulded glazed bowl (rim). Fabric 46; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green11.

Comments: Thin mottled glaze with frequent tiny intrusions.

Comparanda: (arcade design) Ḥasbān (Sauer, 1994: pl. on p. 271); Ṭabaqat Faḥl (Smith, 1973: pl. 93.807); Tal al-Mutasallim (Schumacher, 1908: fig. 269, 270); Tal Nimrīn (Dornemann, 1990: pl. II, 2.14).

16. A.4129

Relief-moulded glazed bowl (rim). Fabric 60; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = ochre4.

Comments: Glassy glaze on interior. Exterior glaze is more mottled.

Comparanda: (decorative features) 'Ayzariyya (Saller, 1957: fig. 59.3423); Hasbān, 'Early Mamluk' phase (Sauer, 1973: fig. 138); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingam, 1985: fig. 41.31); and Sabastīyya (Crowfoot *et al.*, 1932: fig. 84a.10).

Catalogue page 24. Relief-moulded lead-glazed ware**1. A.4137**

Relief-moulded glazed bowl (rim). Fabric 59; Technique = wheelthrown/moulded; lead glazed = brown3.

Comments: Glassy glaze with regular small intrusions and some crazing.

Comparanda: see A.4125

2. D.5218

Relief-moulded glazed bowl (rim). Fabric 61; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green10/green18.

Comparanda: see A.4128

3. F.7692

Relief-moulded glazed bowl (rim). Fabric 62; Technique = wheelthrown/moulded; lead glazed = green4.

Comments: Glassy slightly mottled glaze. Incised design in slip of interior. Similar type to A.4150.

Comparanda: see A.4125

4. A.4141

Relief-moulded glazed bowl (base). Fabric 61; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = ochre3.

Comments: Glassy glaze with regular small intrusions.

Comparanda: (decoration) Jerusalem, Church of the Ascension (Corbo, 1965: fig. 112.17); and Tal Abū Qa'dān, phase M (Franken and Kalsbeek, 1975: fig. 38.32).

5. F.7698

Relief-moulded glazed bowl (base). Fabric 60; Technique = wheelthrown/moulded; slipped = buff5; lead glazed = green4/ochre5.

Comments: Glassy glaze with pronounced crazing. Incised design in slip on interior.

6. A.4142

Relief-moulded glazed bowl (base). Fabric 60; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green12.

Comparanda: (zigzag pattern) 'Afūla (Dothan, 1955: fig. 1.9); Baysān (Zori, 1966: pl. 10.e); Jerusalem, Damascus Gate (Wightman, 1989: pl. 64.11); Tal Jazar (MacAlister, 1912: pl. CLXXXIX.14); and Tal Nimrīn (Dornemann, 1990: pl. II.2.13).

7. A.4131

Relief-moulded glazed bowl (base). Fabric 60; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = ochre4.

Comments: Similar to A.4129 in ceramic, glaze type and decoration.

Comparanda: see A.4129

8. F.6965

Relief-moulded glazed jar (base). Fabric 36; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = ochre10/undecorated.

Comments: Closed vessel shape.

Comparanda: decorative features) 'Ayn Shams (Grant and Wright, 1938: pl. L.26); and Jerusalem, Ophel (MacAlister and Duncan, 1926: pl. XXIII.7).

9. A.4150

Relief-moulded glazed (body). Fabric 62; Technique = wheelthrown/moulded; lead glazed = green4. Comments: Incised pattern in slip on interior.

10. A.4147

Relief-moulded glazed bowl (body). Fabric 51; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green13.

Comments: Glassy, speckled glaze.

Comparanda: (design) Jerusalem, Damascus Gate (Wightman, 1989: pl.64.13).

11. A.4143

Relief-moulded glazed bowl (body). Fabric 60; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = ochre5.

Comments: Glassy glaze with occasional intrusions.

Comparanda: see A.4142

12. A.4144

Relief-moulded glazed bowl (body). Fabric 60; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green4/ochre5.

13. A.4145

Relief-moulded glazed bowl (body). Fabric 60; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green10/ochre5.

Comments: Glassy glaze. Part of a pedestal bowl.

14. A.4143

Relief-moulded glazed bowl (body). Fabric 60; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = ochre5.

Comments: Glassy glaze with occasional intrusions.

Comparanda: see A.4142

15. A.4149

Relief-moulded glazed (body). Fabric 61; Technique = wheelthrown/moulded; slipped = buff1; lead glazed = brown4.

Comments: Similar to A.4129 in ceramic, glaze type and decoration.

Comparanda: see A.4129

16. A.4151

Relief-moulded glazed (body). Fabric 47; Technique = wheelthrown/moulded; slipped = buff3; lead glazed = green4/ochre5.

Comments: Glassy speckled glaze.

Comparanda: (lattice pattern) Nahal Yattir region (Govrin, 1991: site 216, fig. 2.10); Tabaqat Faḥl (Smith, 1973: pl. 93.807); Tal al-Mutasallim (Schumacher, 1908: fig. 270); and Tal Nimrīn (Flanagan *et al.*, 1994: fig. 17.3).

17. F.7718

Relief-moulded glazed (body). Technique = wheelthrown/moulded; slipped = buff; lead glazed = ochre.

18. F.7717

Relief-moulded glazed (body). Technique = wheelthrown/moulded; slipped = buff; lead glazed = ochre.

19. D.5222

Relief-moulded glazed (body). Fabric 61; Technique = wheelthrown/moulded; slipped = buff²; lead glazed = ochre⁹.

Comments: Regular impurities in glaze. Glaze has corroded on exterior.

20. D.5373

Relief-moulded glazed (body). Fabric 61; Technique = wheelthrown/moulded; slipped = buff⁵; lead glazed = ochre⁵.

Comments: Glaze has adhered poorly to exterior.

21. A.4153

Relief-moulded glazed (body). Fabric 60; Technique = wheelthrown/moulded; slipped = buff¹; lead glazed = green².

Comments: Glassy speckled glaze.

22. A.4155

Relief-moulded glazed (body). Fabric 61; Technique = wheelthrown/moulded; slipped = buff³; lead glazed = green¹¹.

Comments: Glassy speckled glaze.

23. D.5219

Relief-moulded glazed (body). Technique = wheelthrown/moulded; lead glazed = ochre.

Comments: Metallic glassy glaze with occasional intrusions. Similar decoration to A.4147.

24. F.7708

Relief-moulded glazed (body). Technique = wheelthrown/moulded; slipped = buff; lead glazed = green.

Comparanda: (repeated crosses) Ma'anit region (Ne'eman, 1990: site 55, fig. 1.9); and Tal Abū Qa'dān, phase L (Franken and Kalsbeek, 1975: fig. 38.31).

25. F.7731

Relief-moulded glazed (body). Technique = wheelthrown/moulded; lead glazed = ochre/green.

26. D.5372

Relief-moulded glazed (body). Fabric 62; Technique = wheelthrown/moulded; lead glazed = ochre¹.

Comparanda: see A.4129.

Catalogue page 25. Relief-moulded lead-glazed and plain alkaline-glazed ware (earthenware and stonepaste)

1. A.4148

Relief-moulded glazed (body). Fabric 59; Technique = wheelthrown/moulded; slipped = buff¹; lead glazed = green³/ochre⁵.

Comments: Glassy glaze with regular intrusions. Moulded details have been outlined with black pigment.

2. F.7709

Relief-moulded glazed (body). Technique = wheelthrown/moulded; slipped = buff; lead glazed = green.

3. A.4152

Relief-moulded glazed (body). Fabric 47; Technique = wheelthrown/moulded; slipped = buff³; lead glazed = green⁴/ochre⁵.

Comments: Glassy speckled glaze.

Comparanda: (simplified scroll) Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 39.12).

4. A.4160

Relief-moulded glazed (body). Fabric 30; Technique = wheelthrown/moulded; slipped = buff³; lead glazed = ochre⁵/brown⁴.

Comments: Mottled glaze. Incised patterns in slip on interior.

5. D.5111

Relief-moulded glazed (body). Technique = wheelthrown/moulded; lead glazed = green¹⁵.

Comments: Similar type to A.4152.

Comparanda: (simplified scroll) Jerusalem, Armenian Garden, 'Mamluk' (Tushingham, 1985: fig. 39.12).

6. D.5221

Relief-moulded glazed (body). Technique = wheelthrown/moulded; slipped = buff²; lead glazed = ochre⁶.

7. A.4168

Glazed ('imitation celadon') bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear³.

Comments: Transparent glaze with pronounced crazing. Heavily corroded. Similar profiles in black and white wares (A.4223) and turquoise and black wares (D.5234) at Karak.

Comparanda: Buṣrā, phase VII (Berthier, 1985: fig. 60); Jerusalem, Armenian Garden, 'Ayyubid' phase (Tushingham, 1985: fig. 40.12); and Ruṣāfa (Logar, 1991: fig. 5.2).

8. A.4180

Glazed ('imitation celadon') bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = green⁹.

Comments: Glassy transparent glaze with some corrosion.

9. A.4178

Glazed ('imitation celadon') bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown/moulded; alkaline glazed = green⁸.

Comments: Thick opacified glaze.

Comparanda: Chinese bowl from Fuṣṭāṭ (Gyllensvard, 1975: pl. 37.5).

10. A.4175

Glazed ('imitation celadon') bowl (rim). Fabric 63 (stonepaste) (stonepaste); Technique = wheelthrown; alkaline glazed = green⁷.

Comments: Glassy transparent glaze. Scalloped edge and incised pattern on interior.

Comparanda: Ba'albak (Sarre, 1925: fig. 24.39).

11. A.4164

Glazed ('imitation celadon') bowl (rim). Fabric 64; Technique = wheelthrown/moulded; alkaline glazed = green5.

Comments: Thick transparent glaze. Heavily corroded.

Comparanda: Similar rim type on Chinese wares: Fustāt (Gyllensvard, 1975: fig. 18.4). Also Nippur (Gibson, Armstrong and McMahon 1998: fig. 20.6).

12. A.4162

Glazed ('imitation celadon') bowl (rim). Fabric 64; Technique = wheelthrown; alkaline glazed = green4.

Comments: Thick transparent glaze. Heavily corroded.

Comparanda: (rim profile) Ḥamā (Riis and Poulsen, 1957: fig. 400); and Jerusalem, Damascus Gate (Wightman, 1989: pl. 68.12). On Chinese wares: Fustāt (Gyllensvard, 1975: figs. 26.1, 2; 35.3).

13. F.7919

Glazed ('imitation celadon') bowl (rim). Fabric 64; Technique = wheelthrown; alkaline glazed = blue12.

Comments: Semi-opaque glassy blue glaze with pronounced crazing.

14. A.4167

Glazed ('imitation celadon') (rim). Fabric 64; Technique = wheelthrown; slipped = buff; alkaline glazed = blue8.

Comments: Thick glassy semi-transparent glaze. Neck of a vase?

15. F.7908

Glazed ('imitation celadon') bowl (rim). Fabric 64; Technique = wheelthrown/moulded; alkaline glazed = green6.

Comparanda: (scalloped rim) Burj al-Aḥmar, phase D1 (Pringle, 1986: fig. 51.77); Jerusalem, Damascus Gate (Wightman, 1989: pl. 68.10); and Tripoli (Salamé-Sarkis, 1980: pl. LXX.4). On Chinese wares: Fustāt (Gyllensvard, 1975: fig. 35.4).

16. A.4216

Glazed ('imitation celadon') jar? (rim). Fabric 65; Technique = wheelthrown; alkaline glazed = grey3, grey4.

Comments: Glassy opacified glaze with mottled colouration.

17. D.5033

Glazed ('imitation celadon') bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear.

Comments: Part of an underglaze painted vessel? Similar to black and white ware base, A.4238.

18. A.4191

Glazed ('imitation celadon') bowl (base). Fabric—; Technique = wheelthrown; alkaline glazed = clear 3.

19. A.4196

Glazed ('imitation celadon') beaker? (base). Fabric 29; Technique = wheelthrown; alkaline glazed = clear3.

Comments: Thin semi-opaque glaze with occasional large intrusions. Comparable to black and white base, A.4221.

20. A.4192

Glazed ('imitation celadon') bowl (base). Fabric 64; Technique = wheelthrown; alkaline glazed = green2.

Comments: Thick semi-transparent glaze. Possibly slipped.

Comparanda: see A.4170.

21. A.4190

Glazed ('imitation celadon') bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = green⁴.

Comments: Thick transparent glaze. Similar type to A.4162.

22. A.4170

Glazed ('imitation celadon') bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear³.

Comments: Transparent glaze with pronounced crazing. Heavily corroded.

Comparanda: Dhībān (Winnett and Reed, 1964: pl. 66.21); Jerusalem, Armenian Garden, 'Ayyubid' phase (Tushingham, 1985: fig. 40.13); and Quṣayr Qadīm (Whitcomb and Johnson, 1979: fig. 41.b).

23. A.4189

Glazed ('imitation celadon') bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear³.

Comments: Glaze heavily corroded.

Catalogue page 26. Plain alkaline-glazed ware, black under colourless glazed ware, and black under turquoise glazed ware

1. F.7927

Glazed ('imitation celadon') bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = green¹⁹.

Comments: Transparent glassy glaze. Designs have been incised into the body under the glaze on the interior.

Comparanda: (radiating design on interior) Fuṣṭāṭ (Ashmolean Museum: P.592); Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: fig. 41.22); and Quṣayr Qadīm (Whitcomb and Johnson, 1979: pl. 38.m).

2. F.7928

Glazed ('imitation celadon') bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown/moulded; alkaline glazed = green⁸.

Comments: Thick opacified glaze with pronounced crazing. Bowl has been thrown with a hole in the base and a wafer of ceramic has been added to cover the aperture prior to firing. No designs are visible on the wafer due to the thickness of the glaze.

Comparanda: (use of wafer and hole in base) Fuṣṭāṭ (Arab Museum, Cairo, 1922: pl. 107 (top right); Ashmolean Museum: P.622, P.623). Same feature on Chinese wares from Middle East: Fuṣṭāṭ (Gyllensvard, 1975: pl. 37.4); Ḥamā (Riis and Poulsen, 1957: fig. 355); and Julfār (Hansman, 1985: pl. 1.g).

3. D.5223

Glazed ('imitation celadon') bowl (body). Fabric 62; Technique = wheelthrown/moulded; alkaline glazed = green⁹. Comments: Thick opacified glaze over hard ceramic.

Comparanda: (ribbed body) Fuṣṭāṭ (Ashmolean Museum: P.593); and 'Tal Minis' (Porter and Watson, 1987: pl. 4). On Chinese wares in the Middle East: Antioch (Waagé, 1948: fig. 93.b); and Fuṣṭāṭ (Gyllensvard, 1975: p. 18).

4. A.4166

Glazed ('imitation celadon') bowl? (body). Fabric 63 (stonepaste); Technique = wheelthrown/moulded; alkaline glazed = green5. Comments: Thick transparent glaze with some corrosion.

5. F.7943

Black and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear4; Underglaze colour = black1.

Comments: Rough glaze.

6. A.4225

Black and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear2; Underglaze colour = black1.

Comments: Occasional ferrous impurities in ceramic.

7. A.4226

Black and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear; Underglaze colour = black1/undecorated.

Comments: Highly corroded glaze. Fabric ranges in colour from 10YR 9/3–7.5YR 7/5 and with extensive tiny basalt inclusions.

8. A.4223

Black and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear3; Underglaze colour = black1.

Comments: Occasional yellow inclusions in ceramic.

Comparanda: Tal Abū Qa'dān, phase Q (Franken and Kalsbeek, 1975: fig. 38.13).

9. F.7944

Black and white (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear1; Underglaze colour = black1.

Comments: Corroded glaze with pronounced crazing. Similar design on A.4222 and black under turquoise vase, A.4282.

Comparanda: (repeated cross design) Ḥamā (Riis and Poulsen, 1957: fig. 769).

10. A.4222

Black and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear3; Underglaze colour = black1.

Comments: Similar design on F.7944 and black under turquoise vase, A.4282.

Comparanda: (repeated cross design) Ḥamā (Riis and Poulsen, 1957: fig. 769).

11. A.4221

Black and white beaker? (base). Fabric 29; Technique = wheelthrown; alkaline glazed = clear2; Underglaze colour = undecorated/black2.

Comments: Semi-transparent glaze over pale earthenware body. Similar to A.4196.

Comparanda: Jerusalem, Armenian Garden, 'Ayyubid' phase (Tushingham, 1985: fig. 40.6).

12. A.4237

Black and white vase? (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear3; Underglaze colour = black1.

Comments: Occasional small brown inclusions in ceramic.

13. A.4233

Black and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear3; Underglaze colour = black1.

14. A.4240

Black and white bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear; Underglaze colour = black.

Comments: Glaze corroded. Occasional tiny basalt and tiny brown inclusions in ceramic.

Comparanda: Pelican design on underglaze-painted wares: Ḥamā (Riis and Poulsen, 1957: fig. 688, also cf. figs. 497–500). Pelican design on Fatimid Egyptian lustre wares: Fuṣṭāṭ (Bahgat and Massoul, 1930: pls. VII.6; X.2, 7; XI.5; XII.10; XXIII.1; XXX.2).

15. A.4227

Black and white bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear; Underglaze colour = black1.

Comments: Occasional small brown inclusions in ceramic. Dot pattern also found on A.4394, A.4450, A.4457 and F.8064.

Comparanda: (dot pattern) Southern Ghawr, Khirbat Shaykh ʿĪsā (MacDonald, 1992: pl. 32.f)

16. A.4239

Black and white bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear; Underglaze colour = black1.

Comments: Glaze corroded. Regular tiny basalt inclusions in ceramic.

17. A.4220

Black and white bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear; Underglaze colour = black1/undecorated.

Comments: Glaze corroded.

Comparanda: (painting style) Burj al-Aḥmar, phase E (Pringle, 1986: fig. 51.81).

18. A.4238

Black and white bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear3; Underglaze colour = black1/undecorated.

Comments: Occasional small brown inclusions in ceramic. Comparable to Egyptian 'miniature style' (Lane, 1957: p. 19, pl. 16.b).

19. A.4224

Black and white bowl (body). Technique = wheelthrown; alkaline glazed = clear2; Underglaze colour = black1/undecorated.

Comments: Occasional small brown inclusions in ceramic. Incised decoration has been made into the black underpainting. Zigzag pattern also found on black under turquoise shard, F.7963

20. A.4232

Black and white (body). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear; Underglaze colour = black1.

21. A.4282

Black under turquoise vase (complete profile). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue2; Underglaze colour = undecorated/black1.

Comments: Very soft friable fabric with occasional pale brown inclusions. Glassy glaze with pronounced crazing.

Comparanda: (profile) Burj al-Aḥmar, phase E (Pringle, 1986: fig. 51.80); Hamā (Riis and Poulsen, 1957: fig. 769); and Qaṣr al-Ḥayr East (Grabar *et al.*, 1978: pl. G-5; G-2.1b).

22. A.4248

Black under turquoise bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue1; Underglaze colour = black1.

Comments: Occasional tiny basalt in ceramic.

Comparanda: Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: figs. 41.35; 44.1). Also Ruṣāfa (Legner, 1964, pl. 1).

23. A.4257

Black under turquoise bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue 2/clear3.

Comments: Heavily corroded glaze. Underpainted decoration is impossible to discern.

24. A.4279

Black under turquoise bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue2; Underglaze colour = black1.

Comments: Occasional tiny basalt inclusions in ceramic.

25. F.7964

Black under turquoise bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = blue1; Underglaze colour = black1.

Comments: Soft, friable body and corroded glaze.

Comparanda: see F.7963. Painting style: Tal Barrī (Pecorella, 1983: fig. 5); and Ruṣāfa (Logar, 1991: fig. 5.14).

26. A.4244

Black under turquoise bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue1; Underglaze colour = black1.

Comments: Blackening on exterior surfaces.

27. F.7963

Black under turquoise bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = blue15; Underglaze colour = black1/undecorated.

Comments: Soft friable body and corroded glaze.

Comparanda: (rim profile) Ruṣāfa (Logar, 1991: fig. 5.9, 10, 13, 14); and Southern Ghawr, al-Rujūm (MacDonald, 1992: pl. 35.c).

28. D.5234

Black under turquoise bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = blue9; Underglaze colour = black1.

Comparanda: see F.7963

Catalogue page 27. Black under turquoise glaze ware and polychrome underpainted ware

1. A.4248

Black under turquoise bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue1; Underglaze colour = black1. Comments: Occasional tiny basalt in ceramic.

Comparanda: Jerusalem, Armenian Garden, 'Mamluk' phase (Tushingham, 1985: figs. 41.35; 44.1). Also Ruṣāfa (Legner, 1964, pl. 1).

2. A.4274

Black under turquoise bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue1; Underglaze colour = black1.

Comments: Badly corroded glaze. Inscribed shape on the underside of the base may be a maker's mark.

Comparanda: (profile) Jerusalem, Armenian Garden, 'Ayyubid' phase (Tushingham, 1985: fig. 40.13); Jerusalem, Damascus Gate (Wightman, 1989), pl. 69.13; Qaṣr al-Ḥayr East (Grabar *et al.*, 1978: pl. G-1.18e); Quṣayr Qadīm (Whitcomb and Johnson, 1979: pl. 43s); and Ruṣāfa (Logar, 1991: fig. 16.14). Roundel design: Ḥamā (Riis and Poulsen, 1957: figs. 551, 552).

3. A.4276

Black under turquoise bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue2; Underglaze colour = black1.

Comments: Corroded glaze. Underpainted decoration no longer visible.

4. A.4245

Black under turquoise bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown. Underglaze colour = black1.

Comparanda: Tabgha (Loffreda, 1982: fig. 10.1).

5. A.4242

Black under turquoise bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue1; Underglaze colour = black1.

Comparanda: see A.4253.

6. A.4275

Black under turquoise bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue2; Underglaze colour = black1.

Comments: Underglaze pattern no longer visible due to corroded glaze.

Comparanda: see A.4274.

7. A.4247

Black under turquoise bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue1; Underglaze colour = black1.

Comments: Heavily corroded glaze. Central design no longer visible.

Comparanda: (spiral design) Fuṣṭāṭ (Arab Museum, Cairo, 1922: pl. 99); and Ruṣāfa (Logar, 1991: fig. 6.5, 7).

8. A.4252

Black under turquoise vase (neck). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue2; Underglaze colour = black1.

Comments: Occasional tiny yellow inclusions in ceramic.

9. A.4246

Black under turquoise vase; shoulder; Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear4/green1; Underglaze colour = black1.

Comments: Pronounced crazing and blackening under the glaze. Uneven glaze surface on the interior.

Comparanda: Ḥamā (Riis and Poulsen, 1957: fig. 565); Quṣayr Qadīm (Whitcomb and Johnson, 1979: pl. 51.j; 1982: pl. 38.r, s); and Ruṣāfa (Logar, 1991: fig. 6.6). Also Southern Ghawr, Khirbat Shaykh ʿIsā and Rujūm (MacDonald 1992: pls. 32.d; 34.d).

10. A.4281

Black under turquoise (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = green2; Underglaze colour = black1.

Comments: Harder, denser fabric with occasional yellow inclusions.

11. A.4254

Black under turquoise (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue2; Underglaze colour = black1.

12. F.7967

Black under turquoise bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue1; Underglaze colour = black1/undecorated.

Comments: Soft friable ceramic.

Comparanda: (profile) Zirʿin (Grey, 1994: fig. 10.2). Decoration: Baʿalbak (Sarre, 1925: p. 125, fig. 38 and p. 130, fig. 56).

13. A.4243

Black under turquoise bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue1; Underglaze colour = black1.

Comparanda: Qaṣr al-Ḥayr East (Grabar *et al.*, 1978: pl. G-1.18b).

14. B.4661

Black under turquoise bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; slipped = buff3; alkaline glazed = blue1; Underglaze colour = black1/undecorated.

Comparanda: (painting style) Baʿalbak (Sarre, 1925: pl. 24.68a).

15. A.4256

Black under turquoise (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue2; Underglaze colour = black1.

16. A.4255

Black under turquoise (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue1; Underglaze colour = black1.

Comparanda: (use of green glaze with black underpainting) ʿAmmān, Tal Sīrān (Hadidi, 1989: p. 140), Fuṣṭāṭ (Scanlon, 1971: p. 225; Ashmolean Museum, unpublished); Quṣayr Qadīm (Whitcomb and Johnson, 1982: pl. 38.k, q-t), and Ṭūḍ (Joel, 1992: p. 3, section II).

17. A.4253

Black under turquoise bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue2; Underglaze colour = black1.

Comments: similar painting style on A.4242 .

Comparanda: (painting style) Quşayr Qadīm (Whitcomb and Johnson, 1979: pl. 51.j, k); and Ruşāfa (Logar, 1991: fig. 6.8).

18. F.7991

Polychrome bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear4; Underglaze colour = black1, brown8/black1.

Comments: Glassy glaze with pronounced crazing.

19. F.7990

Polychrome bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear6; Underglaze colour = black1, blue2, brown8/black1.

Comments: Corroded glaze. Brown pigment has a slightly raised profile.

20. F.7992

Polychrome bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear; Underglaze colour = black1, green3/black1, blue17.

Comments: Heavily corroded glaze. Green pigment acts as a resist to the glaze.

21. A.4366

Polychrome bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue6, blue2, brown3/black1.

Comments: Glassy glaze.

Catalogue page 28. Polychrome underpainted ware and turquoise and black ware

1. F.8164

Polychrome bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear6; Underglaze colour = black1, blue4/black1, blue2.

Comments: Corroded glaze. Comparable profile and decoration in turquoise and black wares, A.4406 and A.4407.

Comparanda: (bichrome painted) Burj al-Aḥmar, phase D (Pringle, 1986: fig. 51.84); and Tal Abū Qa'dān, phase J (Franken and Kalsbeck, 1975: fig. 38.1).

2. A.4387

Polychrome bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue5, green3/black1, blue5.

Comments: Occasional tiny yellow and brown inclusions in ceramic. Green pigment acts as a resist to the glaze.

Comparanda: (use of green pigment) Beirut (Anon., 1995: pl. on p. 16); and Fustāṭ (Ashmolean: P.725, P.274).

3. A.4390

Polychrome bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear5; Underglaze colour = black1, blue5, brown3/black1.

4. F.8201

Polychrome bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear6; Underglaze colour = black1, blue4, blue2, brown8/black1.

Comments: Corroded glaze.

Comparanda: (glaze colours) Ḥayfā, St. Mary of Carmel (Pringle, 1984: fig. 9.77).

5. A.4234

Polychrome bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear3; Underglaze colour = black1, ochre1/undecorated.

Comments: Occasional small brown inclusions in ceramic.

Comparanda: (central motif) Ḥamā (Riis and Poulsen, 1957: figs. 505, 507, 508, 589).

6. A.4385

Polychrome; bowl; base. Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue6, brown3/undecorated.

Comparanda: Qaṣr al-Ḥayr East (Grabar *et al.*, 1978: pl. G-1.18d).

7. A.4383

Polychrome bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear; Underglaze colour = black1, blue, brown/undecorated.

Comments Occasional tiny basalt and tiny yellow inclusions and some brown discolouration of the ceramic. Glaze almost totally decayed.

8. A.4384

Polychrome bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue, brown3/undecorated.

Comments: Some yellow staining of ceramic. Heavily corroded glaze.

Comparanda: Fuṣṭāṭ (Arab Museum, Cairo, 1922: pls. 95 [top] and 96 [top]); and Jerusalem, Armenian Garden (Tushingam, 1985: fig. 38.6).

9. A.4407

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue2/black1.

Comments: Regular yellow inclusions in glaze.

Comparanda: (decorative band) Tal al-Mutasallim (Schumacher, 1908: fig. 266); and on a vase discovered in Italy (Lane, 1957: pl. 16A).

10. A.4409

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear; Underglaze colour = black1, blue2/black1.

Comments: Occasional brown inclusions in ceramic.

11. A.4406

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, green1/black1.

12. A.4425

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear; Underglaze colour = black1, blue2/black1.

Comments: Corroded glaze. Occasional brown and yellow inclusions.

Comparanda: Tal Abū Qa'dān, phase J (Franken and Kalsbeek, 1975: fig. 38.1).

13. A.4424

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue2/black1.

Comments: Heavily corroded glaze. Occasional brown inclusions in ceramic.

Comparanda: Nicosia (Megaw, 1951b: pl. XLV.A5). Also Tal al-Mutasallim (Schumacher, 1908: fig. 266).

14. A.4408

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue1/black1.

Comments: Glassy glaze with pronounced crazing.

Comparanda: (profile) Ṭabaqat Faḥl (McNicoll *et al.*, 1992: pl. 127.8).

15. A.4431

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear3; Underglaze colour = black1, blue2/black1.

Comments: Corroded glaze with pronounced crazing.

Comparanda: Tal Abū Qa'dān, phase J (Franken and Kalsbeek, 1975: fig. 38.1).

16. F.8006

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear6; Underglaze colour = black1, blue2/black1.

Comments: Corroded glaze.

17. A.4418

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue1.

Comments: Occasional yellow inclusions in ceramic.

Catalogue page 29. Turquoise and black ware**1. A.4395**

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear5; Underglaze colour = black1, blue2/black1.

Comments: Occasional brown inclusions in ceramic. Glassy glaze with pronounced crazing.

Comparanda: (profile) Burj al-Aḥmar, phase E (Pringle, 1986: fig. 51.82, 84). Design on rim: Ḥasbān, 'Early Mamluk' phase (Sauer, 1973: fig. 4.144); and Tal Qaymūn (Ben Tor and Portugali, 1979: fig. 5.3).

2. A.4394

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue2/black1.

Comments: Very occasional brown and yellow inclusions in ceramic.

Comparanda: (profile) Burj al-Aḥmar, phase E (Pringle, 1986: fig. 51.82, 84).

3. A.4421

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue2/black1.

Comments: Some ferrous staining in glaze. Glaze corroded.

Comparanda: Tal Qaymūn (Ben-Tor *et al.*, 1979: fig. 5.3).

4. F.8013

Turquoise and black bowl (base). Fabric 63 (stonepaste); Technique = wheel-thrown; alkaline glazed = clear4; Underglaze colour = black1, blue1/black1.

Comments: Glassy glaze with pronounced crazing.

Comparanda: (roundel design) St. Mary of Carmel, Ḥayfā (Pringle, 1984a: fig. 9.75); and Ḥamā (Riis and Poulsen, 1957: fig. 770).

5. F.8014

Turquoise and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear6; Underglaze colour = black1, blue1/undecorated.

Comments: Uneven glaze.

Comparanda: Nippur (Gibson, Armstrong and McMahon 1998: fig. 21.1).

6. F.8015

Turquoise and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear6; Underglaze colour = black1, blue2/undecorated.

Comments: Heavily corroded glaze.

7. A.4417

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear3; Underglaze colour = black1, blue1.

Comments: Corroded glaze.

8. A.4420

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear5; Underglaze colour = black1, blue2/black1.

Comments: Occasional brown inclusions in ceramic.

9. A.4418

Turquoise and black bowl (rim). Fabric 63 (stonepaste); Technique = wheel-thrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue1.

Comments: Occasional yellow inclusions in ceramic.

Catalogue page 30. Turquoise and black ware and blue and black ware**1. A.4426**

Turquoise and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear; Underglaze colour = black1, blue2/black1.

Comments: Occasional brown and yellow inclusions in ceramic. Corroded glaze.

Comparanda: ('tree design') Antioch (Waagé, 1948: fig. 55.18); 'Ayn Shams (Grant and Wright, 1938–9: pl. L.24); Ḥamā (Riis and Poulsen, 1957: fig. 567); and Nicosia (Megaw, 1951b: pl. XLV.A4).

2. A.4428

Turquoise and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue2/black1.

Comments: Splash of clear glaze has been added on the underside of the base. On this type of blazon, see Mayer (1933), pp. 34–35.

Comparanda: unprovenanced (Christie's, 1992: cat. no. 30). Also Fustāt (Arab Museum, Cairo, 1922: pls. 100, 104; Bahgat and Massoul, 1930: pl. XLVI); and Ḥamā (Riis and Poulsen, 1957: fig. 797).

3. A.4429

Turquoise and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed.

4. A.4433

Turquoise and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue2/black1.

Comments: Splash of glaze added on the underside of the base.

5. A.4430

Turquoise and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear; Underglaze colour = black1, blue2/black1.

Comments: Occasional brown and yellow inclusions in ceramic.

6. F.7968

Turquoise and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear; Underglaze colour = black1, blue1/undecorated.

Comments: Soft friable body.

7. A.4432

Turquoise and black (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = undecorated/black1, blue2.

Comments: Occasional yellow inclusions in ceramic. Part of a closed vessel shape.

8. A.4452

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear5; Underglaze colour = black1, blue6/black1.

Comments: Some yellow staining of ceramic. Heavily corroded glaze.

9. F.8064

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear4; Underglaze colour = black1, blue5.

Comments: Corroded glaze.

Comparanda: ('fir tree' design) Khirbat Fāris (Johns *et al.*, 1989: fig. 27.58; and Tripoli (Salamé-Sarkis, 1980: pl. LXI.2). Floral pattern: Ḥamā (Riis and Poulsen, 1957: fig. 706); and Tripoli (Salamé-Sarkis, 1980: pl. LXI.3).

10. F.8072

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear; Underglaze colour = black1, blue5/black1.

Comments: Heavily corroded glaze.

11. A.4479

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue4/black1.

Comparanda: (decoration: exterior) Damascus (Toueir, 1973: pl. IIB.d); and Fustāṭ (Ashmolean Museum: P.284).

12. F.8073

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear6; Underglaze colour = black1, blue5/black1.

Comments: Glassy glaze.

13. A.4454

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue6/undecorated.

Comments: Heavily corroded on interior.

14. F.8063

Blue and black vase (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear4; Underglaze colour = undecorated/black1, blue11.

Comments: Corroded glaze. Some turquoise colouration on interior.

Comparanda: (profile) Ba'albak (Sarre, 1925: pl. 51g); Fustāṭ (Bahgat and Massoul, 1930: pl. K.82); Qaşr al-Ḥayr East, period 2 (Grabar *et al.*, 1978: pl. G-7.2a, 2b); and Quşayr Qadīm (Whitcomb and Johnson, 1979: pl. 51.g).

15. A.4453

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear5; Underglaze colour = black1, blue7/black1.

Comments: Very occasional tiny basalt inclusions in ceramic. Corroded glaze.

Comparanda: (profile) Jerusalem, Citadel (Johns, 1950: pl. LXII.5).

16. F.8077

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear; Underglaze colour = black1, blue5/black1.

Comments: Corroded glaze. Main decorative program on exterior.

Comparanda: (profile) Ḥamā (Riis and Poulsen, 1957: fig. 717); and Jerusalem, Citadel (Johns, 1950: pl. LXII.6, 7). Similar profile also found in 'Sultanabad'

wares (Lane, 1957: pl. 4; Grube, 1976: no. 209); and Mamluk metalwork (Allan, 1982: nos. 20, 22).

17. F.8077

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear6; Underglaze colour = undecorated/black1, blue4.

Comments: Corroded glaze. Main decorative program on exterior.

Comparanda: for profile see F.8078 [52.7]. Zigzag pattern: Fustāt (Bahgat and Massoul, 1930: pl. XXXVIII.4; Ashmolean Museum: P.283, P.362); and Ḥasbān, 'Early Mamluk' phase (Sauer, 1973: fig. 143).

18. F.8066

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear4; Underglaze colour = black1, blue5/black1.

19. F.8071

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear4; Underglaze colour = black1, blue5/black1.

Comments: Corroded glaze. Perhaps with a handle on exterior.

20. A.4455

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear; Underglaze colour = blue3/black1.

Comments: Corroded glaze.

21. A.4514

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue5.

Comments: Pock-marked, thick glaze.

Comparanda: Fustāt (Ashmolean Museum: P.278).

Catalogue page 31. Blue and black ware

1. F.8079

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue4/black1.

Comments: Body shards and a section of the base (F.8080–8083 [51.2–5]) were also recovered. The walls are extremely thick in order to support the weight of the bowl. The stonepaste is both harder and coarser (containing occasional large ferrous impurities) than the previous examples. Blue pigment is restricted to the interior of the bowl. On the interior the decoration is formed of broad curvilinear motifs filled with more delicate abstract or vegetal ornament. There are no published comparanda for a blue and black bowl of the Ayyubid-Mamluk period constructed on such a scale.

2. F.8080

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue4/black1.

3. F.8083

Blue and black bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue4/black1.

4. F.8081

Blue and black bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue4/black1.

5. F.8082

Blue and black bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue4/black1.

6. A.4450

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear; Underglaze colour = black1, blue5/black1.

Comments: Heavily corroded glaze.

Comparanda: (profile) Ḥasbān, 'Early Mamluk' phase (Sauer, 1973: fig. 143); and Karak, phase I (Brown, 1989: fig. 5.6). Also Tal Qaymūn (Ben Tor *et al.*, 1979: fig. 5.3).

7. A.4469

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear5; Underglaze colour = undecorated/black1, blue4.

Comments: Brown discolouration of ceramic.

8. A.4475

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue7/undecorated.

Comments: Occasional tiny brown inclusions in ceramic.

9. F.8093

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear6; Underglaze colour = black1, blue5/undecorated.

Comments: Thick glassy glaze. Vegetal motif also seen on turquoise and black bowl, F.8013 [49.9].

Comparanda: (symmetrical vegetal motif) Fustāt (Wallis, 1891: Appendix: pl. XVII.3); and St. Mary of Carmel, Ḥayfā (Pringle, 1984a: fig. 9.75).

10. F.8198

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear4; Underglaze colour = black1, blue4/undecorated.

Comments: Decoration of waterweeds derived from Chinese blue and white porcelain. Similar decorative style to blue and white shards such as A.4342 and A.4327.

Comparanda: Fustāt (Ashmolean Museum: P.243).

11. F.8095

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear6; Underglaze colour = black1, blue5/black1.

Comparanda: (design on interior) Damascus, Bāb Sarīja (Toueir, 1973: pl. IIIb.a).

Catalogue page 32. Blue and black ware**1. A.4457**

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue6/black1.

Comments: Friable ceramic and corroded glaze.

Comparanda: Ḥamā (Riis and Poulsen, 1957: fig. 733).

2. F.8065

Blue and black bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear4; Underglaze colour = black1, blue5/black1.

3. A.4478

Blue and black lid? (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue4.

Comments: Very occasional yellow inclusions. Blue and white fragment with same profile, A.4342 [59.3].

Comparanda: (painting on underside) Tal Saylūn (Andersen, 1985: pl. 11.179).

4. F.8089

Blue and black lid? (base). Fabric 63 (stonepaste); Technique = wheelthrown/M moulded; alkaline glazed = clear; Underglaze colour = black1, blue4.

Comments: Corroded glaze. Underside carries an illegible inscription. Architectural or numismatic source for the inscription? Blue and white fragment with same profile, A.4342 [59.3].

Comparanda: (star design) Fustāt (Ashmolean Museum: P.410).

5. A.4477

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue7.

Comments: Shares many of the characteristics of stonepaste, glaze and underpainting style of A.4481 [55.1]. The feature which confirms the high craftsmanship is the cartouche on the underside of the base. For inscriptions and 'signatures' see Fouquet (1900); Bahgat and Massoul (1930); and Abel (1930). The care with which the design was rendered has no parallel in the published material from the Levant. The inscription is incomplete and impossible to decipher due to the corrosion of the glaze.

6. A.4481

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear5; Underglaze colour = black1, blue4/black1.

Comments: Corroded glaze. Figure '8' painted in black pigment on underside of base. A.4482-4484 are shards from the same vessel type.

7. A.4465

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear3; Underglaze colour = black1, blue7/black1.

Comments: Two holes bored into the base after firing (for hanging plate on a wall). Complete composition consists of two adorsed birds flanking a tree. See Fustāt (Bahgat and Massoul, 1930: pl. XXXVIII.2). Two comparable bird design shards from the Metropolitan Museum were submitted to neutron

activation analysis (Jenkins, 1984: pl. 3c; 5a) and a Syrian provenance was suggested.

Comparanda: Ba'albak (Sarre, 1925: p. 127 figs. 48, 52); Damascus (Migeon, 1923: pl. on p. 383); Fustāt (Wallis, 1891: Appendix: pl. VII.2; Arab Museum, Cairo, 1922: pl. 106 top left, pl. 111 top left; Ashmolean Museum: P346, P261); and Ḥamā (Riis and Poulsen, 1957: figs. 745–48). Other animals on similar background: Fustāt (Wallis, 1891: Appendix: pl. XVII.7; Arab Museum, Cairo, 1922: pl. 116); and Ḥamā (Riis and Poulsen, 1957: figs. 750–51).

8. A.4464

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear³; Underglaze colour = black¹, blue⁷/undecorated.

Comments: Pale grey-brown ceramic. Corroded glaze. Splash of glaze on underside of base. Vegetal motifs in roundel may derive from 'Sultanabad' wares (Lane, 1957: pls. A, 1, 3).

Catalogue page 33. Blue and black ware

1. A.4466

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear³; Underglaze colour = black¹, blue⁷/black¹.

Comments: Occasional yellow discolouration of ceramic. Splashes of glaze on underside of base.

Comparanda: (design on interior) Fustāt (Ashmolean Museum: P.248) and Tripoli (Salamé-Sarkis, 1980: pl. LXIII.4)

2. A.4473

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear³; Underglaze colour = black¹, blue⁷/black¹.

Comments: Occasional yellow inclusions in ceramic. Pronounced crazing of glaze. Splash of glaze on underside of base.

Comparanda: (design on interior) Ḥamā (Riis and Poulsen, 1957: fig. 735).

3. A.4462

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear³; Underglaze colour = undecorated/black¹, blue⁶.

4. A.4474

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear³; Underglaze colour = black¹, blue⁷/black¹.

Comments: Occasional basalt and brown inclusions in ceramic. Splash of glaze and underpainted pigment on underside of base.

5. A.4467

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear³; Underglaze colour = black¹, blue⁴/black¹.

Comments: Occasional brown inclusions in ceramic. Rough glaze.

Comparanda: (geometric design) *Ṭabaqat Faḥl* (McNicol *et al.*, 1992: pl. 127.7).

6. F.8092

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear6; Underglaze colour = black1, blue5/black1.

7. A.4463

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue5/undecorated.

Comments: Pale grey-brown ceramic with occasional yellow inclusions. Comparable to Egyptian 'miniature style' (Lane, 1957: pp. 19–20, pl. 16.B).

Comparanda: (symmetrical vegetal motif) *Fuṣṭāṭ* (Wallis, 1891: Appendix: pl. XVII.3); and St. Mary of Carmel, *Ḥayfā* (Pringle, 1984a: fig. 9.75).

8. A.4470

Blue and black bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue4/black1.

Comments: Brown discolouration of ceramic. Corroded glaze.

Comparanda: (design on interior) *Ḥamā* (Riis and Poulsen, 1957: figs. 663, 709).

9. A.4472

Blue and black; bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear5; Underglaze colour = black1, blue5/black1.

Comments: Two small grooves made in the base. Heavily corroded glaze.

Comparanda: (design on interior) Tripoli (Salamé-Sarkis, 1980: pl. LXIII.8) and *Fuṣṭāṭ* (Ashmolean Museum: 1978.2451).

10. A.4494

Blue and black vase (neck). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = undecorated/black1, blue7.

Comments: Occasional dark brown inclusions in ceramic. Part of a closed vessel shape.

11. A.4495

Blue and black Type (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = undecorated/black1, blue7.

Comments: Part of a closed vessel shape.

Comparanda: Ba'albak (Sarre, 1925: pl. 44); *Fuṣṭāṭ* (Ashmolean Museum: P.272); and *Ḥamā* (Riis and Poulsen, 1957: fig. 736).

12. A.4499

Blue and black bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue5.

13. A.4493

Blue and black bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = black1, blue4.

Comparanda: see A.4479.

Catalogue page 34. Blue and black ware and blue and white ware

1. A.4480

Blue and black bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear5; Underglaze colour = black1, blue5/blue5.

2. F.8153

Blue and black bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear; Underglaze colour = black, blue.

Comparanda: (decoration: exterior) Tal al-Mutasallim (Schumacher, 1908: fig. 266).

3. A.4377–4381

Blue and white bowl (complete profile). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = blue6.

Comments: Occasional basalt inclusions in ceramic. Pronounced crazing in glaze. Splash of glaze with a circle of underpainted blue on underside of base. Exterior has a Chinese 'lotus panel' on the lower section with an upper band of Islamic geometric ornament.

Comparanda: Chinese prototypes for trefoil pattern: Damascus (Carswell, 1979: pl. 1); the Tughluqid palace, Delhi (Carswell, 1979: pl. VII–IX); and Topkapi museum (Pope, 1970: pl. 15).

4. A.4290

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = blue3, blue4.

Comments: A.4291–4294 are shards from the same vessel type.

5. A.4300

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = blue4.

Comments: Very occasional brown and yellow inclusions in ceramic. Corroded glaze.

Comparanda: Cairo (Gayraud, 1986: pl. XXV.54); and Ḥamā (Riis and Poulsen, 1957: fig. 791). Chinese blue and white straight rim bowls: Topkapi museum (Pope, 1970: pls. 18–21).

6. F.8172

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear4; Underglaze colour = blue5.

Comments: Glassy glaze with some crazing.

Comparanda: (painting style) Karak, phase I (Brown, 1989: fig. 5.4).

7. F.8166

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown/moulded?; alkaline glazed = clear4; Underglaze colour = blue5.

Comments: Hard yellowish ceramic. Rough glaze with pronounced crazing. Possibly Kūtahya ware.

Comparanda: Cf. Chinese prototypes: Yuan period (Yeo and Martin, 1978: pl. 2 top). Also Julfār (Hansman, 1985: fig. 8.j).

8. A.4309

Blue and white pitcher (rim). Fabric 63 (stonepaste); Technique = wheelthrown;

self-slipped; alkaline glazed = clear2; Underglaze colour = undecorated/blue4.

Comments: Very friable ceramic. Both glaze and ceramic have corroded. Leaf (or feather) decoration on neck derived from Chinese porcelain ewers of the Hongwu period (1368–89). See Wei (2005).

9. A.4308

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear2; Underglaze colour = blue3, blue4.

Comments: Very occasional yellow inclusions in ceramic. Corroded glaze. Rim has scalloped edge.

Comparanda: (rim profile and design) Ḥamā (Riis and Poulsen, 1957: fig. 779).

Late fourteenth-century Chinese prototypes: Topkapi museum (Pope, 1970: pls. 9, 10a, 11, 12, 14b, 15).

10. A.4307

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = blue4.

Comments: Yellow staining of ceramic. Corroded glaze.

Comparanda: (decorative style) Ḥamā (Riis and Poulsen, 1957: fig. 787).

11. A.4306

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = blue4.

Comments: Very occasional yellow inclusions in ceramic. Corroded glaze.

12. F.8175

Blue and white vase (neck). Fabric 63 (stonepaste); Technique = wheelthrown; alkaline glazed = clear4; Underglaze colour = undecorated/blue4.

Comments: Soft friable fabric. Corroded glaze.

13. A.4343

Blue and white bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear; Underglaze colour = blue.

Comments: Occasional yellow and brown inclusions in ceramic. Heavily corroded glaze. Similar roundel in turquoise and black, A.4430.

Comparanda: (roundel design) Damascus, Bāb Sarīja (Toueir, 1973: pl. IIA.f)

14. A.4342

Blue and white lid? (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear1; Underglaze colour = blue4.

Comments: Very occasional yellow inclusions in ceramic. Thick glassy glaze which has slightly discoloured during firing. Decoration of upper section relates to A.4327 [59.2] and A.4377 [57.1]. For similar profile, see blue and black shards, A.4478 [54.4] and F.8089 [54.7]. For similar lids on Chinese ceramics, see Yuan (Xinyuan, 1993: pl. 1; Addis, 1968c: pl. 1) and sixteenth-century Ming blue and white porcelain (Jenyns, 1953: pl. 81.a).

Comparanda: Chinese prototype: Ḥamā (Riis and Poulsen, 1957: fig. 364).

Catalogue page 35. Blue and white ware

1. A.4295

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = blue2.

Comments: Corroded glaze.

Comparanda: Chinese prototype of 'crapemyrtle and blackberry lily' border: Topkapi museum (Pope, 1970: pl. B.5; 7a, 10b); and the Tughluqid palace, Dehli (Carswell, 1979: pl. VII).

2. A.4301

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear4; Underglaze colour = blue4.

Comments: Very occasional brown inclusions in ceramic. Heavily corroded.

Comparanda: Damascus, Bāb Sarīja (Toueir, 1973: pl. IIa.c).

3. F.8167

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear6; Underglaze colour = blue5.

Comments: Glassy glaze with pronounced crazing.

Comparanda: Tal al-Mutasallim (Schumacher, 1908: fig. 266). Chinese prototypes for 'Lotus panel': Topkapi Museum (Pope, 1970: pls. B.5, 6; 21, 22, 24); and a Yuan period bowl shard from Fustāt (Carswell, 1985: pl. 12c). Also Persian blue and white wares (Lane, 1957: pl. 18; Grube, 1976: no. 258).

4. A.4305

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = blue4.

Comments: Yellow staining of ceramic. Corroded glaze.

Comparanda: (band on cavetto) Ḥamā (Riis and Poulsen, 1957: figs. 777, 778). Late fourteenth-century Chinese prototypes: Dehli (Carswell, 1979: pl. XI); and Topkapi museum (Pope, 1970: pls. 3-6, 7b, 8).

5. A.4311

Blue and white bowl (rim). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = blue4.

6. A.4329

Blue and white bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = blue1, blue4/blue4.

Comments: Splashes of turquoise have been added to the design on the interior.

7. A.4327

Blue and white bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = blue4.

Comments: Occasional basalt and brown inclusions in ceramic. Glassy glaze with pronounced crazing.

Comparanda: St. Mary of Carmel, Ḥayfā (Pringle, 1984a: fig.9.78); and Karak (Brown, 1989: fig. 5.5).

8. F.8179

Blue and white bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear4; Underglaze colour = blue4.

Comments: Soft, friable fabric. Thick glaze with pronounced crazing.

9. A.4350

Blue and white bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear3; Underglaze colour = blue6.

Comments: Very occasional black, brown and yellow inclusions in ceramic.
 Comparanda: (decoration) Beirut (Carswell, 1979: pl. XIV); and Fuṣṭāṭ (Ashmolean Museum: 1978.2444; 1978.2489; 1978.2464). Late fourteenth-century Chinese prototype: Topkapi museum (Pope, 1970: pls. 3–6).

10. A.4351

Blue and white tile? (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear³; Underglaze colour = blue⁶.

Comments: Unglazed and unpainted on one side. Fragment of a tile?

Catalogue page 36. Blue and white ware, lustre-painted ware, celadon, Chingpai ware, Shufu ware, blue and white porcelain

1. A.4348

Blue and white bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear; Underglaze colour = blue.

Comments: Heavily corroded.

2. A.4345

Blue and white bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear³; Underglaze colour = blue⁵.

3. A.4349

Blue and white bowl (body). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = clear³; Underglaze colour = blue³/blue⁴.

Comments: Glaze corroded on interior.

4. F.8199

Lustre bowl (base). Fabric 63 (stonepaste); Technique = wheelthrown; self-slipped; alkaline glazed = blue¹⁷.

Comments: Greyish, granular ceramic firing darker grey on unglazed surfaces. Glassy glaze with pronounced crazing. Greenish-gold lustre painted on interior only.

Comparanda: Qaṣr al-Ḥayr East (Grabar *et al.*, 1978: pl. G-2.21b [no. A/C/4/70]).

5. F.7931

Celadon bowl (rim). Fabric 68 (stoneware); Technique = wheelthrown; feldspathic glaze = green⁵. Comments: Glassy glaze with pronounced crazing and occasional impurities. Incised lines under glaze.

Comparanda: Sinan shipwreck (Anon., 1985: pl. 54 no.78); and Topkapi museum (Krahl, 1, 1986: p. 216, no. 18 [TKS 15/327]).

6. D.5249

Celadon bowl (rim). Fabric 69 (stoneware); Technique = wheelthrown/moulded; feldspathic glaze = green⁸.

Comments: Thin glassy glaze. Incised pattern on interior.

Comparanda: Yuan dynasty bowl from the Pescadores islands (Chen Hsinhsung, 1985: pl. 20. See also pls. 40, 48).

7. D.5248

Celadon bowl (rim). Fabric 68 (stoneware); Technique = wheelthrown/moulded; feldspathic glaze = green⁸.

Comments: Thick glassy glaze with extensive crazing.

8. F.7934

Celadon (lid). Fabric 68 (stoneware); Technique = wheelthrown/moulded; feldspathic glaze = green8.

Comments: This type of lid shape with the addition of relief moulding under the glaze is seen in Longquan celadon of the twelfth and thirteenth centuries (e.g. Valenstein, 1989: fig. 99). Pale glaze colour is generally associated with Longquan products of the twelfth and thirteenth centuries (Valenstein, 1989: pp. 101–102).

9. A.4541

Celadon bowl (body). Fabric 68 (stoneware); Technique = wheelthrown/moulded; feldspathic glaze = green8. Comments: Transparent glaze with occasional intrusions and pronounced crazing. Bubbling in glaze.

Comparanda: (fluted ornament) Ḥamā (Riis and Poulsen, 1957: figs. 358, 359); Julfār (Hansman, 1985: pl. 1.a, b); Pescadores islands (Chen Hsin-hsiung, 1985: pls. 9, 11); Sinan shipwreck (Anon., 1985: pl. 56, no. 81; pl. 57, no. 82); and Topkapi museum (Krahl, 1, 1986: pls. 174–176 [TKS 15/313, 15/245, 15/330]).

10. F.7933

Celadon bowl (base). Fabric 68 (stoneware); Technique = wheelthrown/moulded; feldspathic glaze = green8. Comments: Thick glassy glaze with moulded details under glaze.

11. A.4542

Celadon bowl (base). Fabric 69 (stoneware); Technique = wheelthrown/moulded; feldspathic glaze = green8.

Comments: Thick transparent glaze with occasional intrusions and pronounced crazing. Bubbling in the glaze.

Comparanda: Quşayr Qadīm (Whitcomb and Johnson, 1979: pl. 51.x).

12. D.5250

Celadon (body). Fabric 68 (stoneware); Technique = wheelthrown/moulded; feldspathic glaze = green8. Comments: Glassy slightly pockmarked glaze. Moulded flower design on interior beneath glaze.

13. A.4526

Qingbai ware (body). Fabric 66 (porcelain); Technique = wheelthrown; lead glazed = clear3.

Comments: Thin transparent glaze. Delicate incised pattern beneath glaze on interior. Combed and incised decoration over a blue or greyish blue clear glaze is reported on qingbai shards from Sung period kilns at: Guangdong and Jingdezhen (see chapter 7).

Comparanda: Sung tomb near Nanchang, dated 1201 C.E. (Baiquan, 1993: pl. 11). For similar decorative features, see also Palawan shipwreck, Philippines (Dupoizot, 1995: fig. 2); Sinan shipwreck, Korea (Anon., 1985: pl. 63 no. 90); Fustāt (Gyllensvard, 1975: pl. 3.3, 5, 6); Ḥamā (Riis and Poulsen, 1957: fig. 362); Julfār (Hansman, 1985: pl. II.b, c); and Quşayr Qadīm (Whitcomb and Johnson, 1979: pl. 51.q).

14. A.4540

Shufu ware bowl (base). Fabric 68 (stoneware); Technique = wheelthrown/moulded; feldspathic glaze = clear7.

Comments: Thin opacified glaze. Regular ferrous impurities and pitting in the glaze surface. Moulded pattern of dragon on the interior is hard to discern. Small bowls and dishes of this type were produced in the Yuan period both in the kilns of Jingdezhen and other unknown production sites (Valenstein, 1989: p. 126; Anon., 1985: p. 219).

Comparanda: Shufu bowl decorated with a dragon in relief, Sinan shipwreck (Anon., 1985: pp. 320–21 no. II-431). Also Philippines (Addis, 1968b: figs. 1, 5, 6; Addis, 1969: pl. 35.a–c).

15. A.4522

Porcelain bowl (base). Fabric 66 (porcelain); Technique = wheelthrown; lead glazed = clear6; Underglaze colour = blue3.

Comments: Occasional ferrous intrusions in ceramic. Thin glaze with occasional ferrous intrusions and pronounced crazing.

16. A.4524

Porcelain bowl (base). Fabric 66 (porcelain); Technique = wheelthrown; lead glazed = clear6; Underglaze colour = blue10, blue5.

Comments: Thick glaze with occasional impurities and pitting. Probably part of a closed vessel shape.

Comparanda: Philippines (Addis, 1968c: pl. 14).

17. A.4520

Porcelain; bowl (rim). Fabric 66 (porcelain); Technique = wheelthrown; lead glazed = clear6; Underglaze colour = blue5.

Comments: Large crazing in glaze. Profile and decoration typical of Ming period wares of the early sixteenth century (see chapter 7).

Comparanda: Bowl probably dating from the Zhengde period (1506–21), with similar diaper pattern rim and floral pattern on the exterior: Lisbon (Luz Afonso, 1996: cat. 5, pp. 48–49).

18. A.4521

Porcelain bowl (complete profile). Fabric 67 (porcelain); Technique = moulded?; lead glazed? = clear6; Underglaze colour = blue9/undecorated.

Comments: Thin glaze with pronounced crazing. Underglaze design has been stencilled on interior. Modern manufacture. Underside of base stencilled with name, 'Bowring.'

19. A.4523

Porcelain bowl (rim). Fabric 67 (porcelain); Technique = moulded?; lead glazed? = clear6; Underglaze colour = blue9/undecorated.

Comments: Thin glaze with pronounced crazing. Modern manufacture.

Section 3: Fabric Descriptions

Comments:

The descriptions are arranged with a broad definition of the hardness and texture of the fabric followed by a note of the fired colour of the surface and core of the ceramic. The remaining part deals with the mineral and organic inclusions. As a X10 hand lens is not sufficient to differentiate between many mineral inclusions, a description of the colour of the inclusion has been pre-

ferred where no distinguishing characteristics can be discerned. Minerals which can readily identified are: basalt, chert, sand and limestone (carbonate). Some fabrics were submitted to petrographic analysis, and the results are discussed in the relevant sections of chapters 6 and 7 (see also Mason and Milwright 1998). Red inclusions may be grog or iron-rich clay nodules in the clay matrix. Colour notations are according to the *Munsell Book of Colour*. This notation is not employed for the handmade wares (fabrics 1–17) because of the high degree of variability in the colour of the fired ceramics.

Handmade Ceramic Fabrics

Fabric 1: Medium-soft, granular fabric with regular voids. Fires red on surface and dark grey in core. Frequent small to medium-size angular quartz. Frequent tiny yellow grits.

Fabric 2: Medium-soft, friable fabric with regular voids. Fires pink-orange on surface and dark grey in core. Regular small to medium-size basalt. Frequent tiny calcite and occasional small carbonate. Regular small red grits. Presence of organic tempering.

Fabric 3: Medium-soft friable fabric with regular voids. Fires pink-orange on surface and grey-brown in core. Occasional small basalt. Regular small to medium-size carbonate. Occasional small red grits. Presence of organic tempering.

Fabric 4: Medium-soft granular fabric with regular small voids. Fires orange on surface and pale brown in core. Regular small basalt. Occasional small carbonate. Occasional small to medium-size yellow grits. Presence of organic tempering.

Fabric 5: Medium, dense fabric with occasional small voids. Fires orange on surface and grey in core. Frequent medium-size quartz. Presence of organic tempering.

Fabric 6: Medium-soft friable fabric with regular voids. Fires pink on surface and grey-brown in core. Regular small to medium-size chert. Frequent tiny calcite and occasional medium-size to large carbonate. Occasional small red grits. Occasional medium-size yellow grits.

Fabric 7: Medium-soft friable fabric with regular voids. Fires orange and dark grey in break. Regular small basalt. Regular small to medium-size carbonate. Presence of organic tempering.

Fabric 8: Medium-soft, dense fabric with occasional voids. Fires pale brown. Regular small to medium-size basalt. Regular small to medium-size red grits.

Fabric 9: Medium-soft, friable fabric with regular voids. Fires orange on surface and dark grey in core. Occasional small basalt. Frequent tiny and occasional medium-size carbonate. Presence of organic tempering.

Fabric 10: Medium-hard dense fabric with occasional tiny voids. Fires dark red on surface and dark grey in core. Occasional small to medium-size basalt. Frequent tiny to small quartz. Occasional medium-size red grits.

Fabric 11: Medium-soft, friable fabric with regular voids. Fires pale brown.

Occasional small to medium-size basalt. Occasional small carbonate. Regular small to medium-size red grits. Presence of organic tempering.

Fabric 12: Medium, dense fabric with occasional tiny voids. Fires dark grey. Frequent small to medium-size basalt. Frequent tiny to medium-size yellow.

Fabric 13: Medium-soft, dense fabric with occasional voids. Fires orange on surface and grey in core. Occasional small basalt. Regular small to medium-size carbonate. Frequent tiny yellow grits. Occasional small red grits. Presence of organic tempering.

Fabric 14: Medium, dense fabric. Fires orange. Regular small to medium-size basalt. Regular small to medium-size carbonate. Occasional small yellow grits. Occasional small red grits.

Fabric 15: Medium-soft, dense fabric with regular voids. Fires pale brown. Regular small basalt. Occasional small carbonate. Regular small to medium-size red grits. Presence of organic tempering.

Fabric 16: Medium-soft, friable fabric. Fires pale brown. Regular small to medium-size basalt. Regular small carbonate. Occasional medium-size quartz. Occasional medium-size red grits.

Fabric 17: Soft, very friable, poorly sorted fabric with regular voids. Regular small basalt. Regular medium-size to large carbonate. Frequent tiny yellow grits. Presence of organic tempering.

Kiln-Fired Fabrics

Fabric 18: Medium, friable fabric with regular voids. Fires pale green (10Y 8.5/3) to red-orange (2.5YR 6.5/8). Regular small to medium-size basalt. Regular small rounded sand. Occasional small carbonate. Regular small to medium-size red grits and occasional large red grits. Occasional presence of organic tempering.

Fabric 19: Medium-hard, dense fabric with occasional voids. Fires pale green on surface (10Y 8.5/3) to orange in core (5YR 7/6). Regular small to medium-size basalt. Occasional quartz. Regular small carbonate. Occasional small to large red grits. Occasional signs of organic tempering.

Fabric 20: Medium-hard, dense fabric with regular small voids. Fires red-brown on surface (2.5YR 6.5/6) to grey in core (2.5YR 5.5/2). Regular small to medium-size basalt. Occasional tiny carbonate. Regular small angular quartz. Occasional medium-size red grits.

Fabric 21: Medium-hard, dense fabric. Fires ochre (5YR 7/6). Regular small to medium-size basalt. Occasional small carbonate. Regular small red grits.

Fabric 22: Medium-hard fabric with honeycomb structure. Fires pale green on surface (5Y 8.5/2) and red/orange in core (10R 5.5/6). Occasional small basalt. Regular small and occasional medium-size sand.

Fabric 23: Medium-hard, dense fabric with occasional small voids. Fires pale green on surface (5Y 8.5/2) and red/orange in core (10R 5.5/6). Regular small to medium-size basalt. Occasional small carbonate. Frequent tiny calcite(?).

Fabric 24: Medium-hard, dense fabric with occasional small voids. Fires from pale green on surface (5Y 8.5/2) and pale ochre in core (7.5YR 8/4).

Regular tiny to medium-size basalt. Occasional small to medium-size quartz. Occasional small to medium-size yellow grits.

Fabric 25: Medium-hard, dense fabric with regular small voids. Fires pale green on surface (5Y 8.5/2) and red-brown in core (5YR 6/6). Frequent tiny to small basalt. Occasional small and very occasional large carbonate. Occasional small red grits.

Fabric 26: Medium-hard, dense fabric with regular small to medium-size voids. Fires pale green on surface (5Y 8.5/2) to pink or ochre in core (2.5YR 6.5/6 and 7.5YR 8/4). Regular tiny to small basalt. Regular small to medium-size carbonate. Regular small to medium-size red grits. Similar type to fabric 24.

Fabric 27: Medium-soft, friable fabric with regular voids. Some variation in the extent of levigation. Fires pale green on surface (5Y 8.5/2) to pink-orange and ochre in core (2.5YR 7/6 and 7.5YR 7/6). Occasional small basalt. Frequent tiny to small carbonate. Occasional tiny sand. Occasional small red grits.

Fabric 28: Medium, dense fabric with regular small voids. Some variation in the extent of levigation. Fires pale green on surface (5Y 8.5/2) to pink-orange in core (5YR 7/6). Occasional small basalt. Regular small sand. Occasional small red grits.

Fabric 29: Medium, dense, granular fabric with regular tiny voids. Fires pale green (5Y 8.5/2). Frequent tiny to small basalt. Regular small sand. Regular tiny to medium-size red grits. Possibly a finer levigated version of fabric 18.

Fabric 30: Medium, dense fabric. Fires from pale green (5Y 8.5/2) to pink (5YR 8/4). Regular small basalt. Frequent tiny and occasional medium-size carbonate. Regular tiny sand. Occasional small red grits.

Fabric 31: Medium, dense fabric. Fires from pale green (5Y 8.5/2) to orange-red (2.5YR 7/6). Occasional small basalt. Regular tiny carbonate. Frequent small quartz. Very occasional small yellow grits. Very occasional red grits.

Fabric 32: Medium-soft, friable fabric. Fires pale green on surface (5Y 8.5/2) and pale brown on core (2.5YR 6/8). Occasional small basalt. Frequent small sand. Occasional carbonate.

Fabric 33: Medium-hard, dense, well-levigated fabric. Fires orange-pink (5YR 7/6) to pale red-brown (5YR 6/8). Regular tiny to small basalt. Occasional small opaque quartz. Occasional small red grits.

Fabric 34: Medium-hard, dense, well-levigated fabric. Fires pale grey (2.5Y 7/4) with streaks of yellow through the fabric. Frequent tiny and occasional small basalt. Very occasional small carbonate.

Fabric 35: Hard, dense, well-levigated fabric. Fires pink-orange. Regular tiny basalt. Regular tiny to small angular quartz. Occasional small red grits.

Fabric 36: Medium fabric with honeycomb texture. Fires grey-brown on surface (2.5Y 8.5/2) to red-brown in core (5YR 6/10). Very occasional small basalt. Frequent tiny to small pale yellow grits. Occasional small sand. Very occasional small red grits.

Fabric 37: Medium, dense fabric with occasional small voids. Fires from (2.5Y 8.5/2) to buff (7.5YR 8/4). Occasional small basalt. Very occasional small carbonate. Frequent tiny and regular small red grits. Occasional small angular quartz.

Fabric 38: Medium-hard, dense well-levigated fabric. Fires grey-green (5Y

6.5/2). Very occasional small basalt. Frequent tiny to small pale yellow grits. Very occasional red grits.

Fabric 39: Medium, dense fabric. Fires grey-green (5Y 6/2). Very occasional small basalt. Occasional small carbonate. Frequent small sand.

Fabric 40: Medium-hard, dense, slightly friable fabric. Fires red-brown on surface (10R 5.5/8) to dark grey in core (10R 4/1). Occasional small basalt. Frequent tiny carbonate.

Fabric 41: Medium-soft, friable fabric with regular voids. Fires from red-brown on surface (2.5YR 6.5/6) and grey in core (2.5YR 5/2). Regular small basalt. Frequent tiny and occasional small carbonate. Regular small quartz.

Fabric 42: Soft, friable fabric. Fires red-brown (5YR 5/4). Frequent small to medium-size basalt. Occasional small carbonate.

Fabric 43: Medium-soft, friable, fine-textured fabric. Fires pale brown (7.5YR 6.5/6). Occasional small basalt. Regular tiny to small carbonate. Presence of organic material. Perhaps a finer version of fabric 42.

Fabric 44: Medium, fine-textured fabric. Fires buff (10YR 7.5/4). Regular tiny to small basalt. Occasional small sand. Very occasional small red grits.

Fabric 45: Medium, friable fabric. Fires buff (10YR 8/4). Regular tiny to medium-size basalt. Occasional medium-size to large carbonate. Frequent tiny and regular medium-size to large red grits. Presence of organic material.

Fabric 46: Medium, friable, dense fabric. Fires pink (5YR 7/6). Occasional tiny to small basalt. Regular tiny opaque quartz. Occasional red grits. Occasional small yellow grits. Frequent small sand.

Fabric 47: Medium, dense fabric. Fires pink (5YR 7/6). Regular tiny to small basalt. Very occasional tiny carbonate. Frequent small sand. Occasional small to medium-size red grits.

Fabric 48: Medium fabric with granular texture. Fires red-brown (5YR 4.5/6). Regular small to tiny basalt. Frequent small to medium-size carbonate. Frequent small sand. Occasional small chert.

Fabric 49: Medium, dense fabric. Fires pink on surface (2.5YR 6/10) and buff on core (7.5YR 8/4). Occasional small basalt. Occasional medium-size carbonate. Regular small sand. Occasional medium-size red grits.

Fabric 50: Medium fabric with granular texture. Fires orange on surface (10YR 7/8) and grey-green on core (5Y 5/3). Regular tiny to small basalt. Occasional small carbonate. Occasional yellow grits. Occasional medium-size red grits. Frequent small sand.

Fabric 51: Medium fabric with regular small voids. Fires red on surface (2.5YR 5.5/8) and grey on core (2.5YR 4.5/2). Occasional tiny to small basalt. Frequent tiny to medium-size carbonate. Occasional small yellow grits.

Fabric 52: Medium, dense, well-levigated fabric. Fires orange (2.5YR 6.5/8). Occasional small to medium-size basalt. Regular small carbonate.

Fabric 53: Medium, well-levigated fabric with dense granular texture. Fires brick-red (2.5YR 6/8). Regular small to medium-size basalt. Occasional small carbonate. Frequent small sand.

Fabric 54: Medium-hard, well-levigated fabric. Striations through fabric. Fires pink (7.5YR 8/6). Frequent tiny red grits. Occasional medium-size carbonate. Occasional tiny chert.

Fabric 55: Medium-hard, dense, well-levigated fabric with occasional voids. Fires pale orange (5YR 6.5/6). Frequent tiny to small basalt. Very occasional small carbonate. Regular small sand.

Fabric 56: Hard, very dense fabric. Fires pale grey (5Y 6.5/1). Regular tiny to small basalt. Regular tiny to small pale orange.

Fabric 57: Hard, very dense fabric with occasional voids. Fires grey-brown (10YR 7/1.5). Occasional tiny basalt. Occasional tiny to small carbonate.

Fabric 58: Very hard, very dense fabric. Fires grey (5Y 6/2 to 2.5Y 8/4). Frequent small basalt and very occasional large basalt. Frequent small quartz.

Fabric 59: Medium-hard, very dense, well-levigated fabric. Fires from grey (2.5Y 8/2) to orange (5YR 7/100). Frequent tiny and occasional small basalt. Regular tiny to small carbonate. Occasional small red grits.

Fabric 60: Medium-hard, dense fabric with regular voids. Fires pink-orange (5YR 7/10). Occasional tiny to small basalt. Frequent small quartz. Regular small carbonate. Regular tiny to small red grits.

Fabric 61: Medium-hard, dense fabric with regular voids. Fires pale buff (7.5YR 9/2). Occasional tiny basalt. Occasional tiny to small carbonate. Frequent tiny red grits. Regular tiny chert.

Fabric 62: Medium-hard, dense, granular fabric. Fires grey (10YR 7/1.5). Regular small basalt. Occasional small pale orange grits. Frequent small sand.

Fabric 63: Medium, dense, friable fabric. Fires pale pink (10YR 9/3). Frequent small sand. Very occasional chert. Very occasional brown grits. Very occasional yellow grits.

Fabric 64: Medium, dense, friable fabric. Fires pink (5YR 5/5 to 10R 4/6). Occasional tiny to small basalt. Occasional tiny to small carbonate. Occasional small to medium-size red grits.

Fabric 65: Medium-soft, friable fabric with occasional voids. Fires pale yellow. Regular tiny and occasional small basalt. Very occasional large carbonate. Regular small to large red grits.

Fabric 66: Very hard, very dense fabric. Fires very pale grey (10B 9/1). Occasional tiny to small ferrous inclusions. Fabric has vitrified. Porcellaneous fabric.

Fabric 67: Hard, dense fabric with slightly granular texture. Fires white. No visible inclusions. Modern porcellaneous ceramic.

Fabric 68: Very hard, very dense fabric with occasional voids. Fires pale grey (5PB 9/1). Very occasional small ferrous impurities. Fabric has vitrified. Stoneware fabric.

Fabric 69: Very hard, dense fabric with granular texture. Fires grey (5PB 7/1). Regular tiny ferrous impurities. Stoneware fabric.

Fabric 70: Soft, friable, porous fabric with regular voids. Fires from grey-pink (2.5YR 7/5) to grey-brown (10YR 6/3). Regular small to large carbonate. Regular small to large basalt. Occasional medium-size yellow grits. Regular red grits. Presence of organic tempering.

Fabric 71: Hard, dense fabric with granular texture. Fires grey (7.5YR 6/3). Frequent small basalt. Frequent small yellow grits. Frequent small sand.

Fabric 72: Very hard, dense fabric with granular texture. Fires off-white (2.5Y 9/2). Occasional small ferrous impurities. Frequent tiny off-white grits.

Section 4: Glaze and Slip Colours

Colours according to: *Munsell Book of Colour* (Baltimore, 1976).

Buff1 = 7.5YR 8.5/4	Clear5 = 10Y 9/1
Buff2 = 2.5YR 9/2	Clear6 = 5BG 9/1
Buff3 = 10YR 9/2	Clear7 = 10BG 8.5/1
Buff4 = 7.5Y 9/2	Clear8 = 5G 9/1
Buff5 = 5YR 9/4	
	Blue1 = 10BG 6/8
Ochre1 = 2.5Y 5/6	Blue2 = 7.5BG 7/6
Ochre2 = 5Y7/10	Blue3 = 10B 5/8
Ochre3 = 10YR 7/10	Blue4 = 10B 3/4
Ochre4 = 10YR 5/8	Blue5 = 2.5PB 4/8
Ochre5 = 2.5Y 7/10	Blue6 = 5PB 3/6
Ochre6 = 2.5Y 8/8	Blue7 = 5PB 4/8
Ochre7 = 5Y 8/12	Blue8 = 10BG 7/6
Ochre8 = 7.5Y 8.5/7	Blue9 = 7.5PB 6/3
Ochre9 = 2.5Y 8.5/5	Blue10 = 2.5PB 6/6
Ochre10 = 10YR 6/9	Blue11 = 7.5B 5/8
Ochre11 = 7.5YR 6/9	Blue12 = 10G 7/6
Ochre12 = 5Y 9/4	Blue13 = 5BG 7/4
Ochre13 = 5Y 5/6	Blue14 = 2.5BG 7/4
Ochre14 = 2.5Y 9/4	Blue15 = 2.5BG 5/6
	Blue16 = 2.5B 5/8
Brown1 = 10YR 5.5/4	Blue17 = 5PB 3/8
Brown2 = 5YR 4.5/2	
Brown3 = 7.5YR 4/4	Green1 = 5BG 7/8
Brown4 = 5YR 2.5/1	Green2 = 5G 4/6
Brown5 = 10YR 4/4	Green3 = 10GY 5.5/8
Brown6 = 7.5YR 3/2	Green4 = 7.5GY 6/6
Brown7 = 5YR 6/10	Green5 = 5GY 7/3
Brown8 = 2.5YR 3/2	Green6 = 2.5GY 8.5/4
	Green7 = 5BG 7/5
Grey1 = 5YR 6/2	Green8 = 2.5G 7.5/4
Grey2 = 10R 5/1	Green9 = 10GY 7/6
Grey3 = 10PB 9/1	Green10 = 2.5G 5/6
Grey4 = 10PB 3.5/1	Green11 = 5GY 6.5/8
	Green12 = 7.5Y 8/9
Black1 = 10Y 2.5/1	Green13 = 10Y 6/6
Black2 = 2.5Y 4/2	Green14 = 2.5GY 5/6
	Green15 = 7.5GY 4/4
Clear1 = 10Y 8.5/2	Green16 = 2.5GY 3/2
Clear2 = 7.5Y 9/2	Green17 = 7.5Y 6/8
Clear3 = 5GY 9/1	Green18 = 5GY 8/8
Clear4 = 2.5GY 9/2	Green19 = 10G 5/6

Green20 = 5Y 5/6

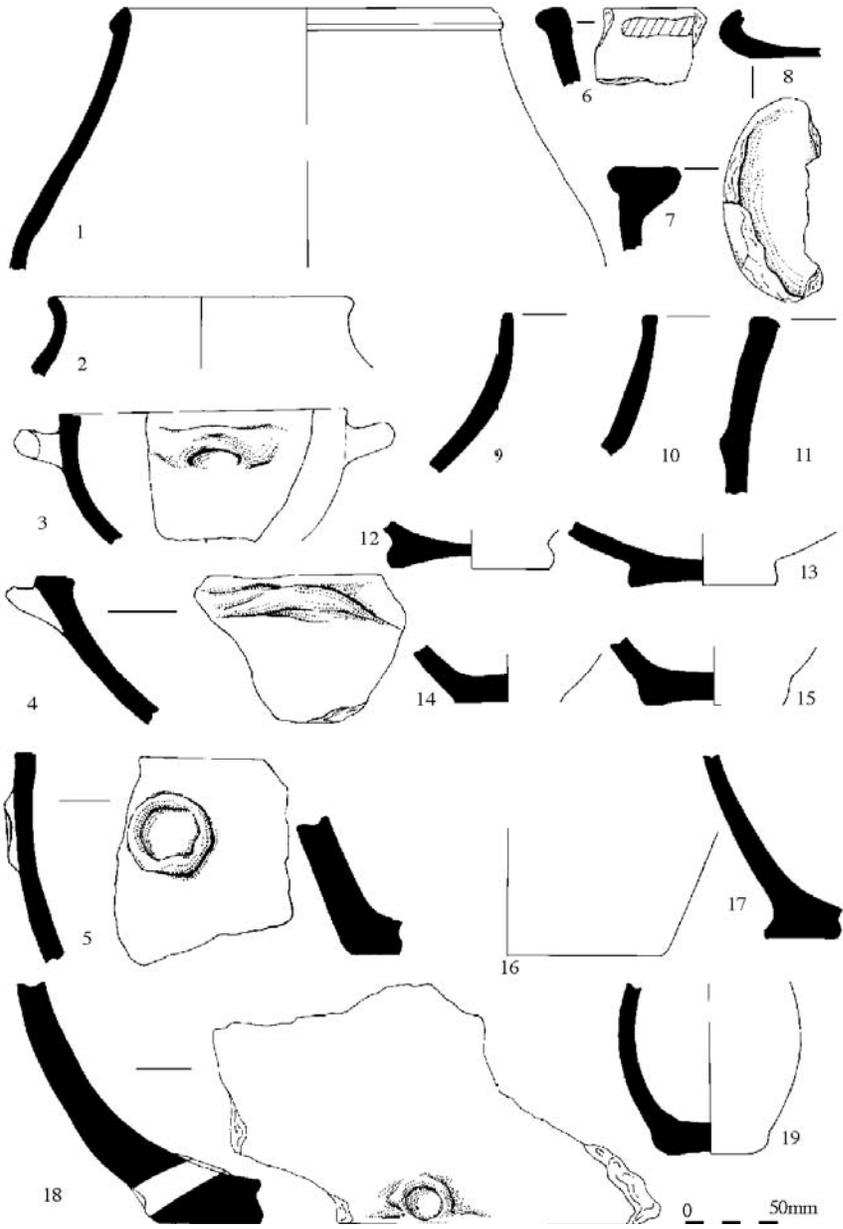
Green21 = 10GY 8.5/2

Red1 = 10R 6/6

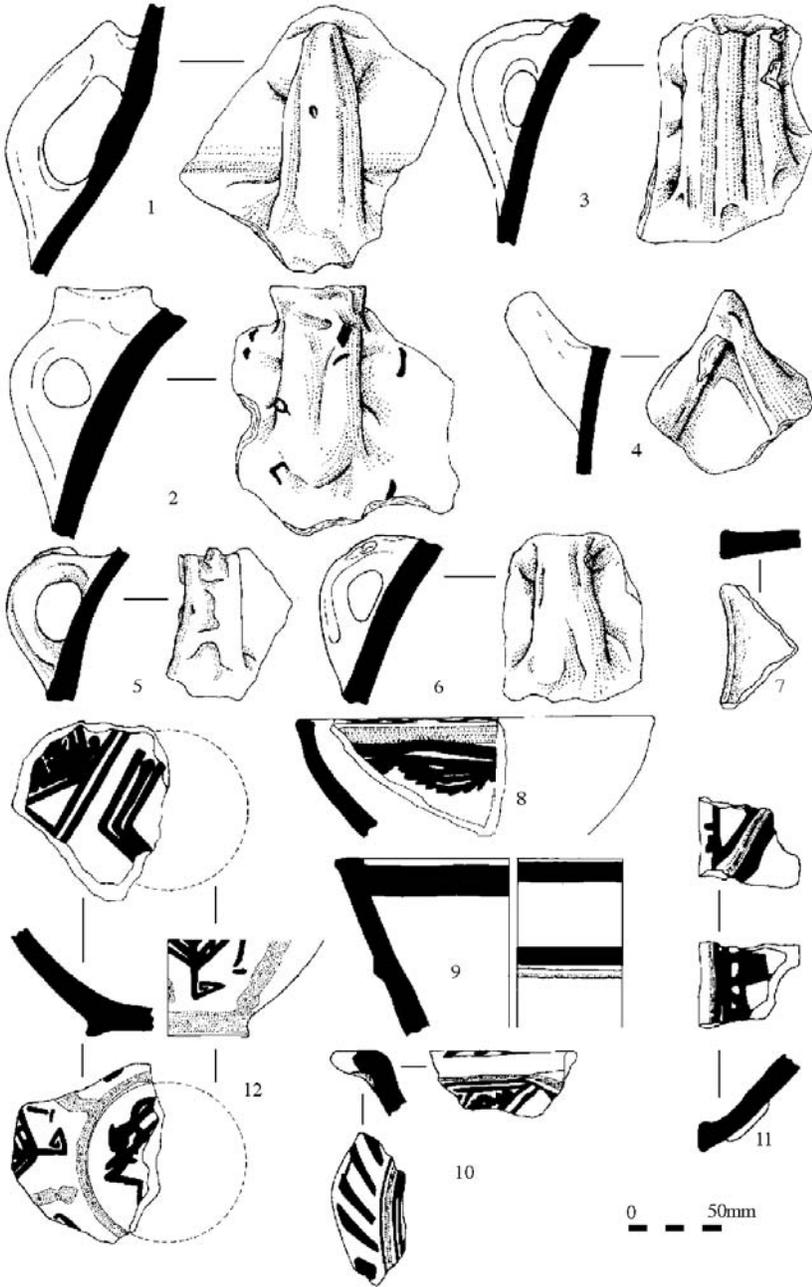
Red2 = 10R 5/9

Red3 = 7.5R 3/6

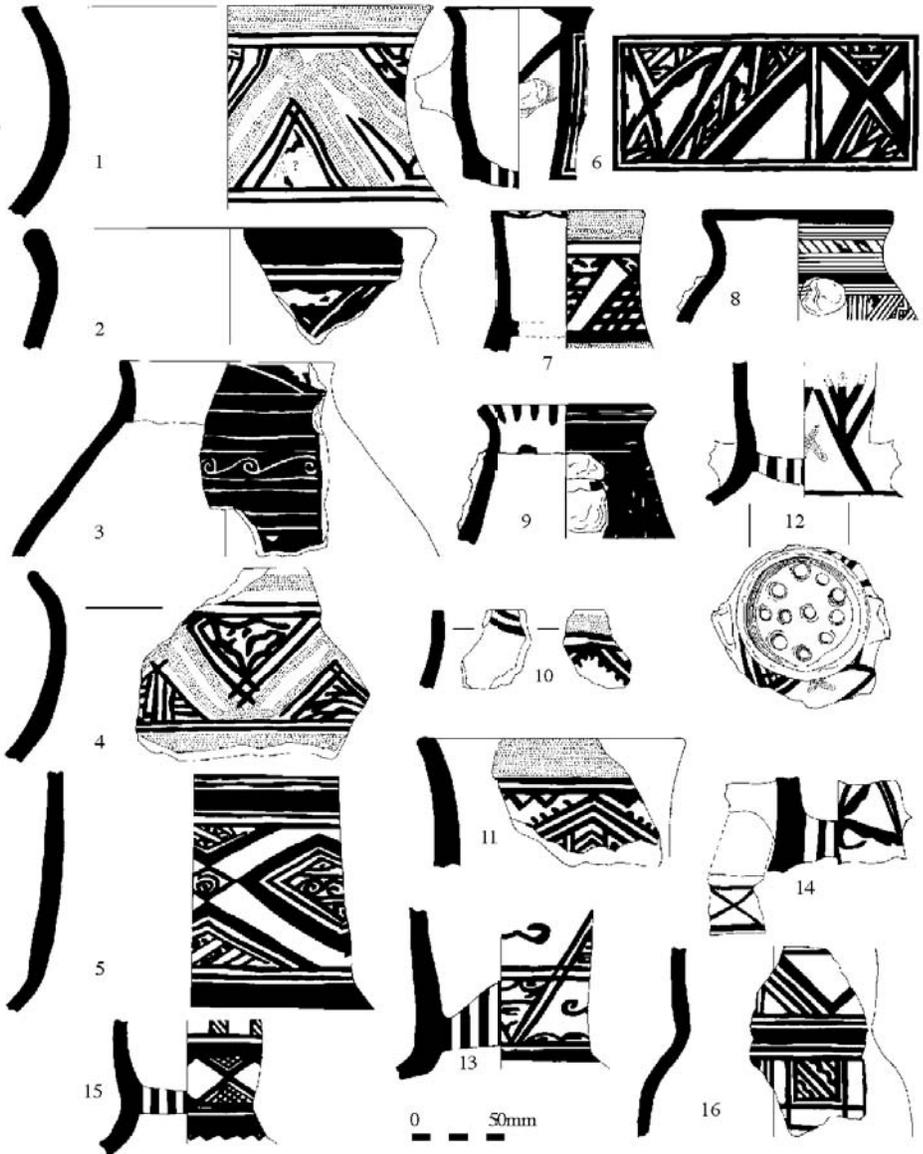
Red4 = 10R 4/6



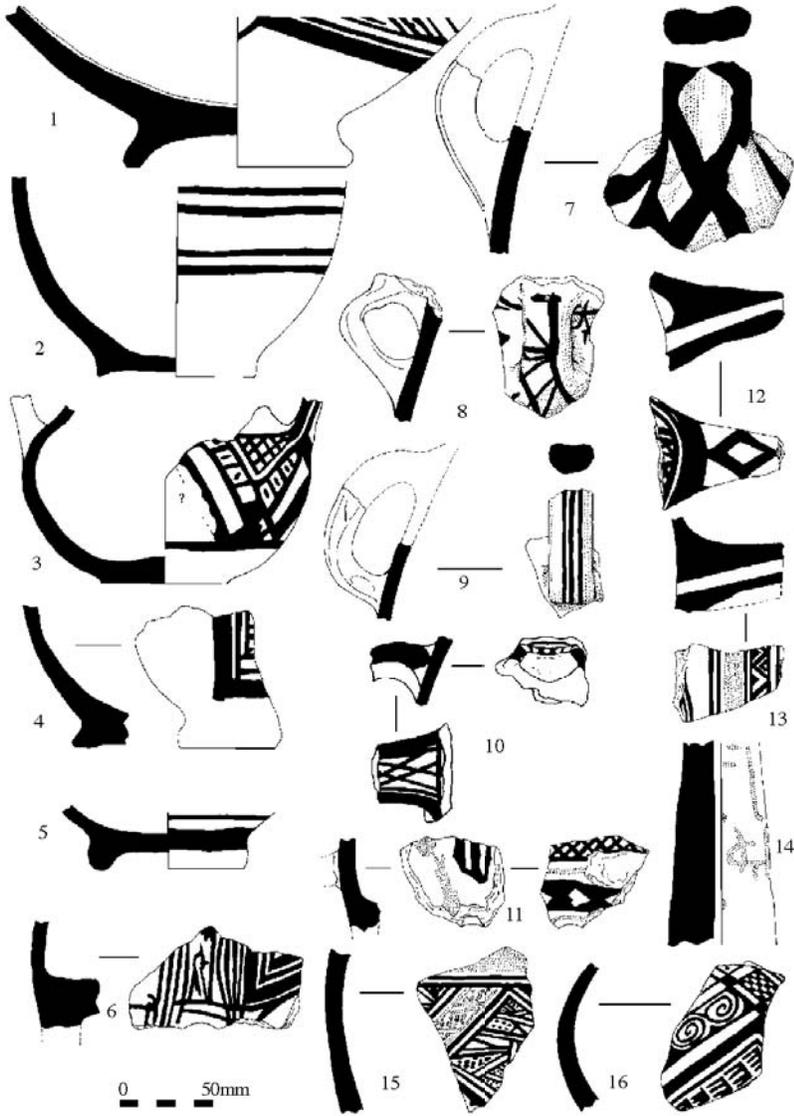
Catalogue Page 1. Handmade wares without slip-painting



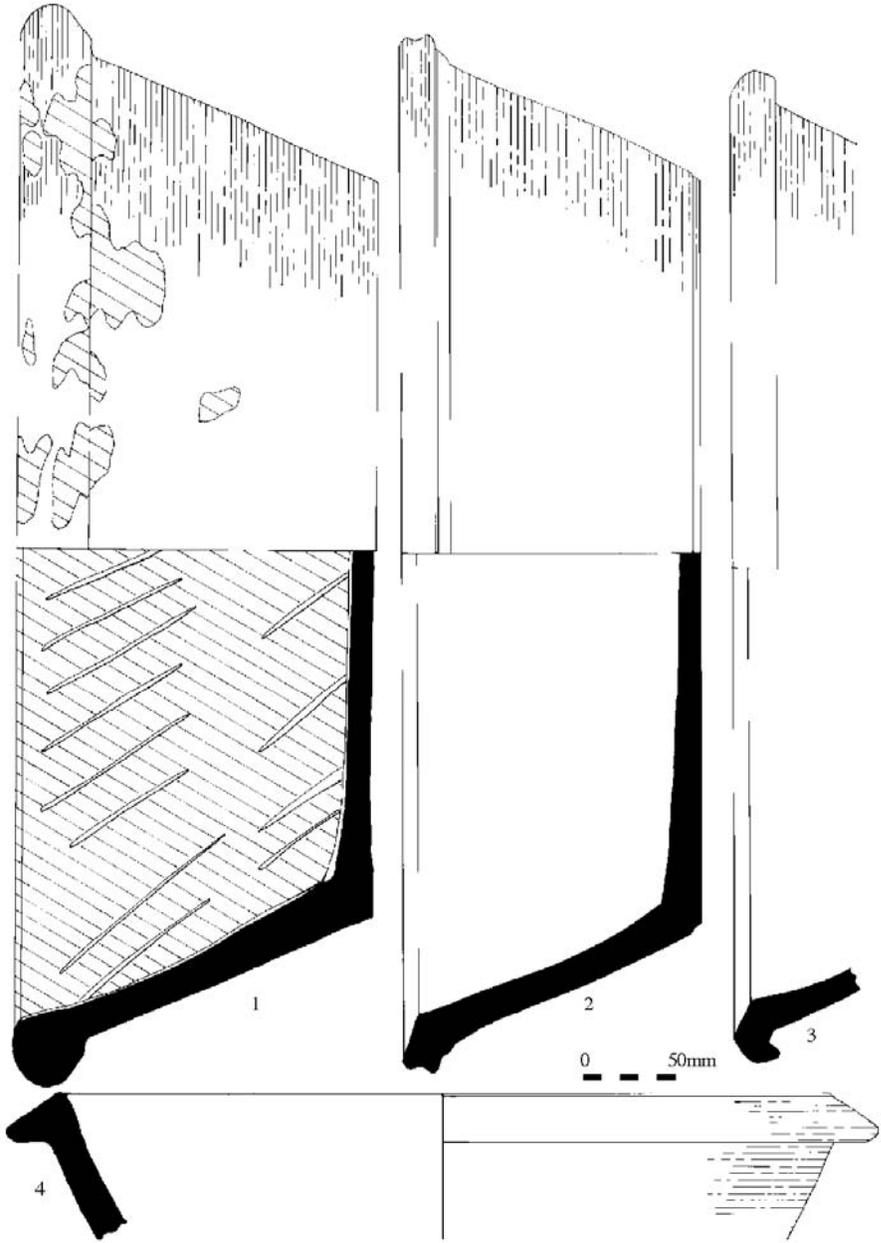
Catalogue Page 2. Handmade wares without slip-painting (1-7) and handmade slip-painted wares (8-12)



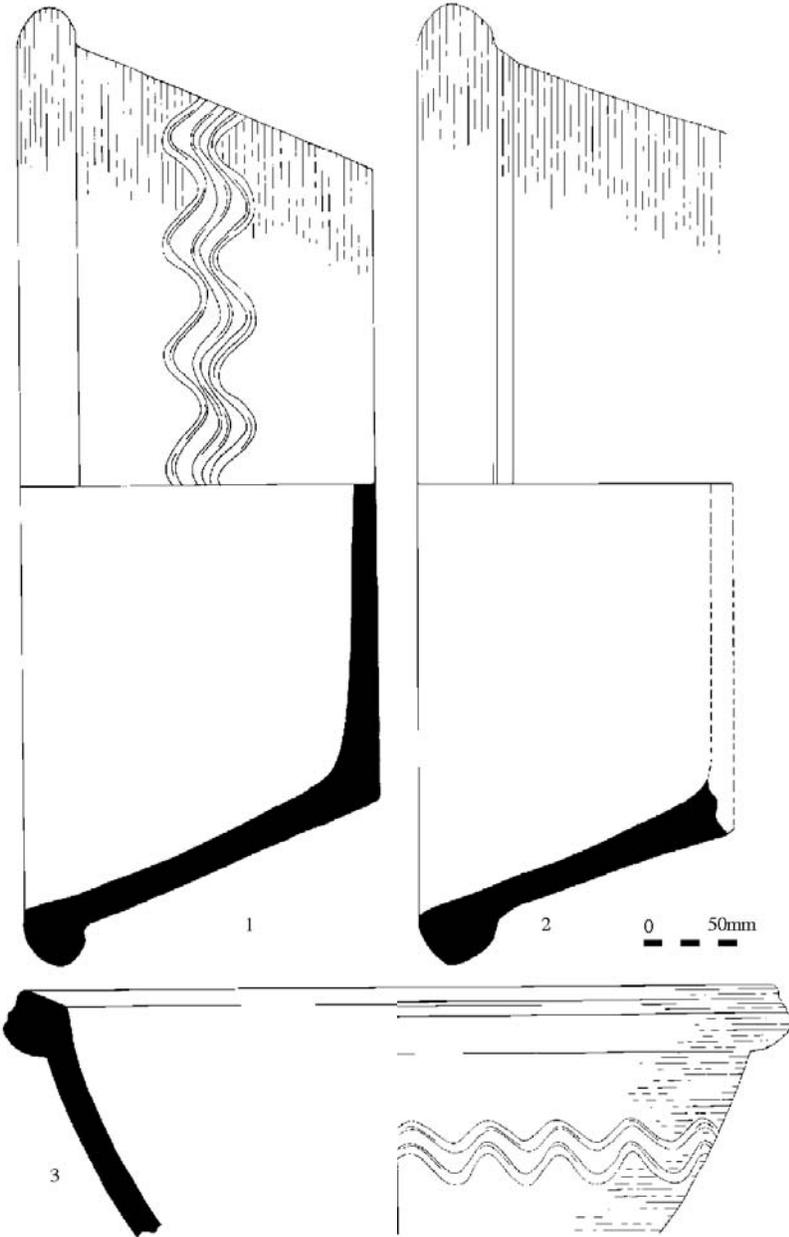
Catalogue Page 3. Handmade wares with slip-painting



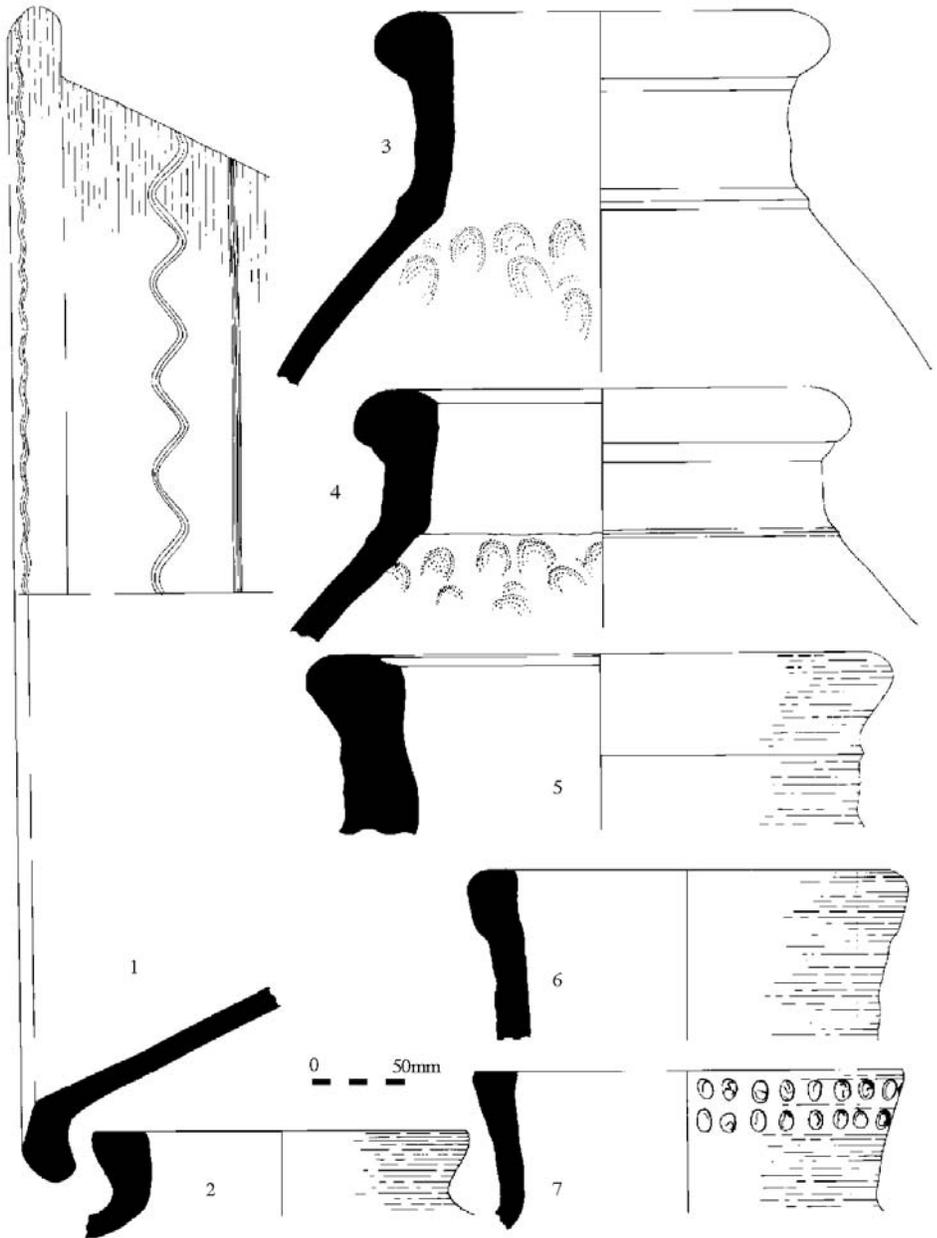
Catalogue Page 4. Handmade wares with slip-painting



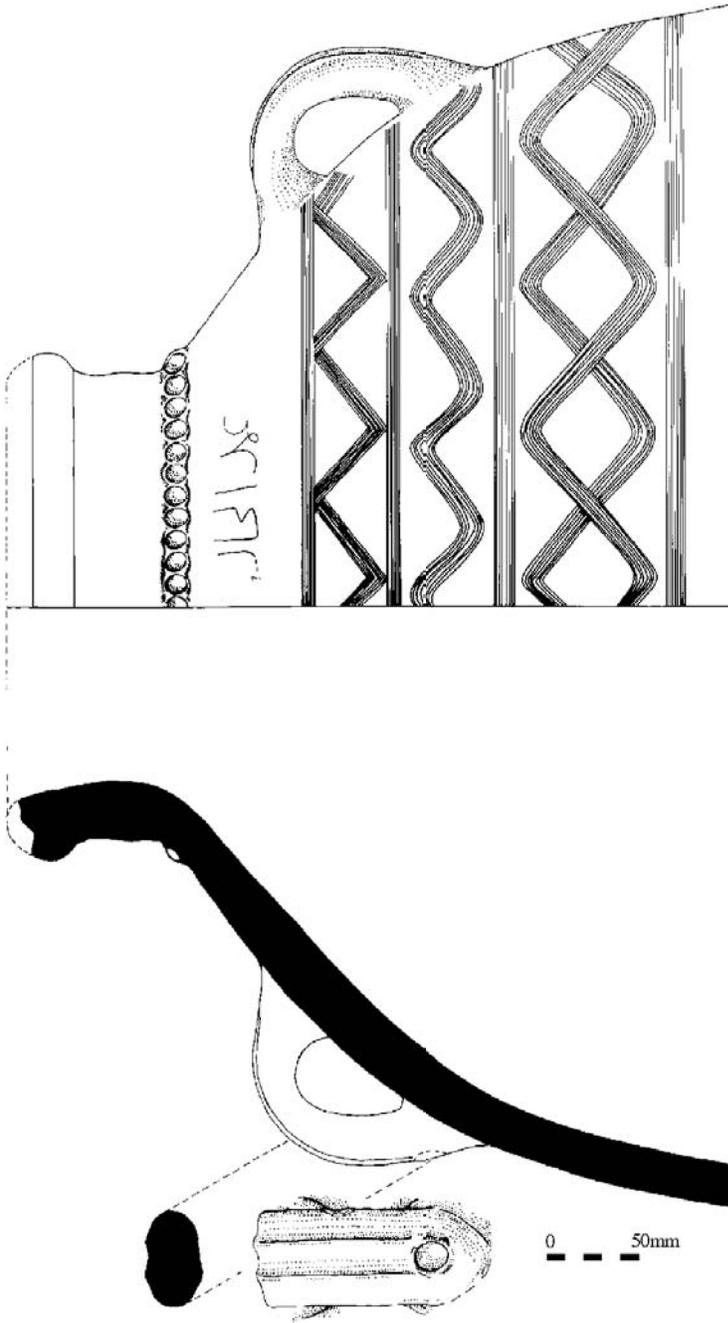
Catalogue Page 5. Unglazed wheelthrown wares: basins



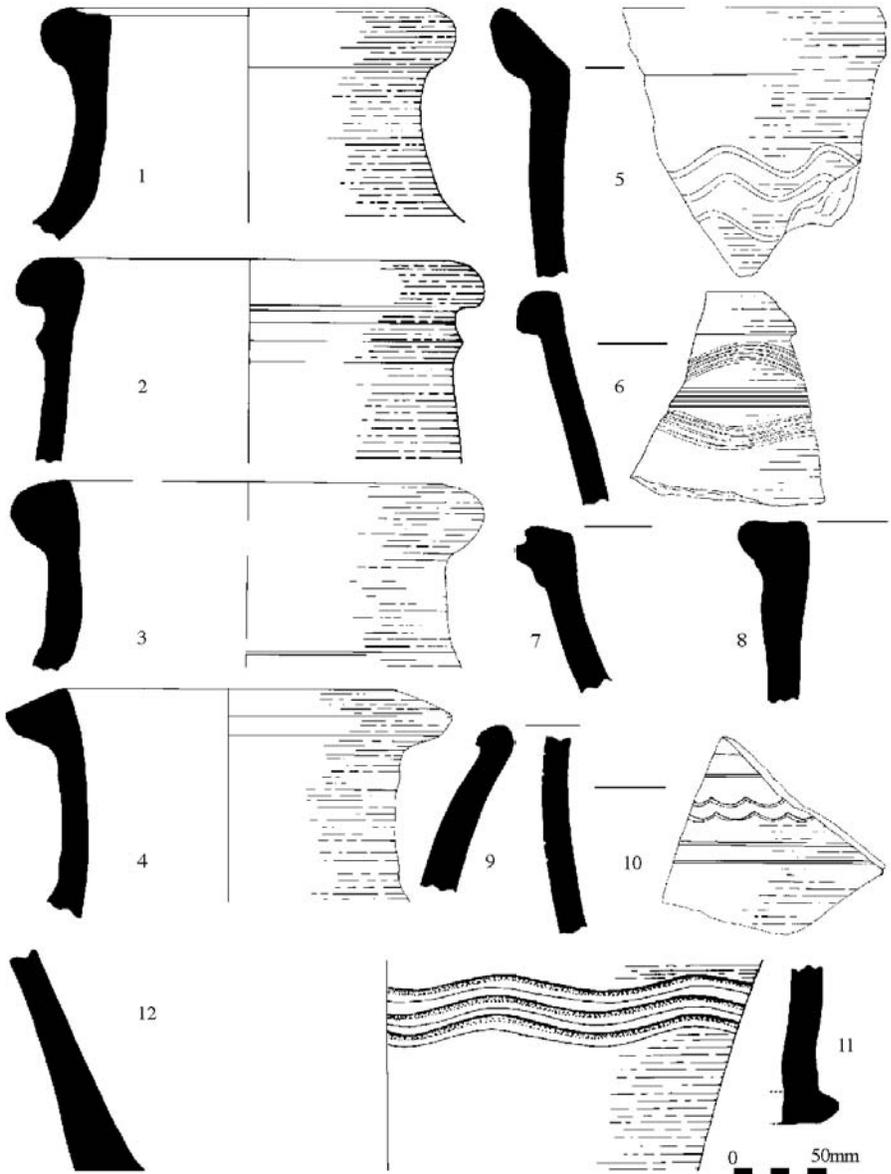
Catalogue Page 6. Unglazed wheelthrown wares: basins



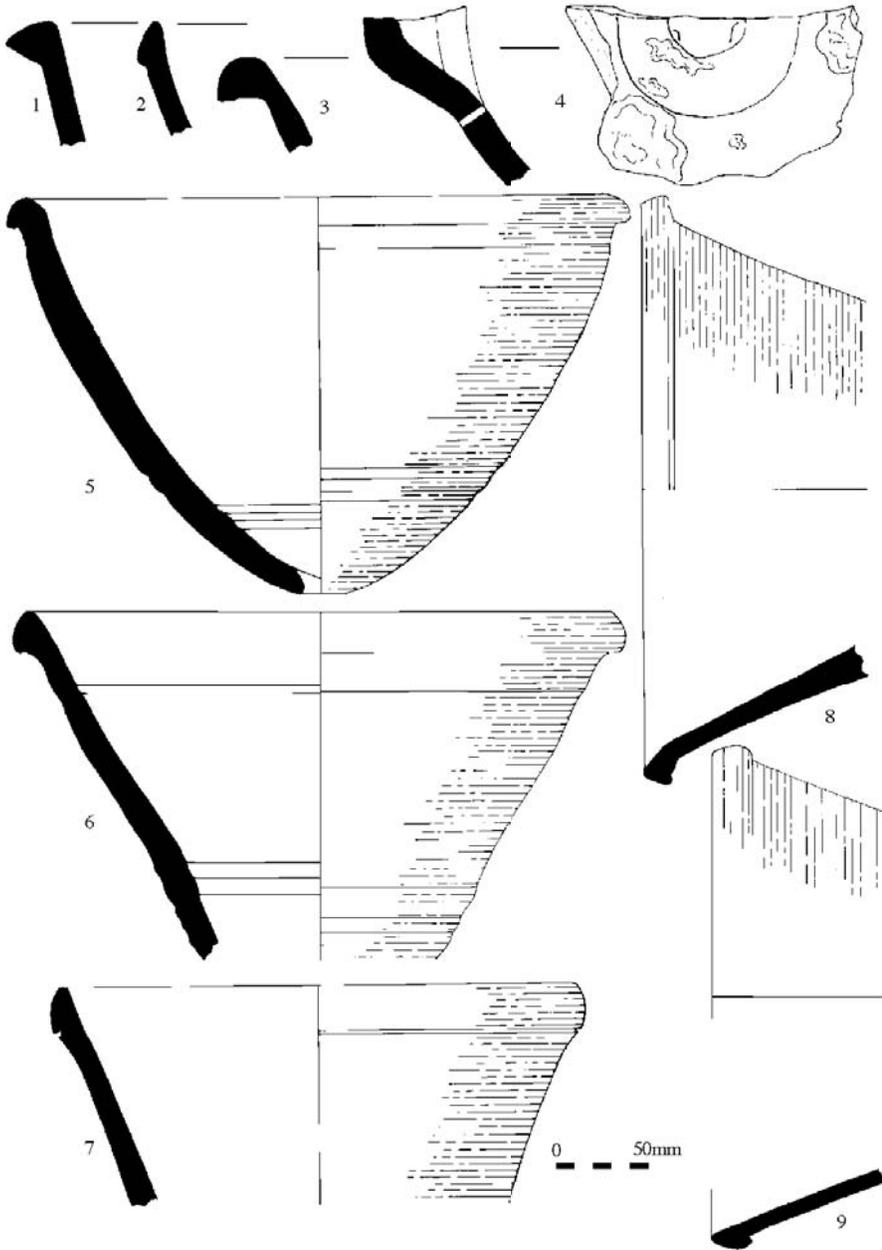
Catalogue Page 7. Unglazed wheelthrown wares: basins and storage jars



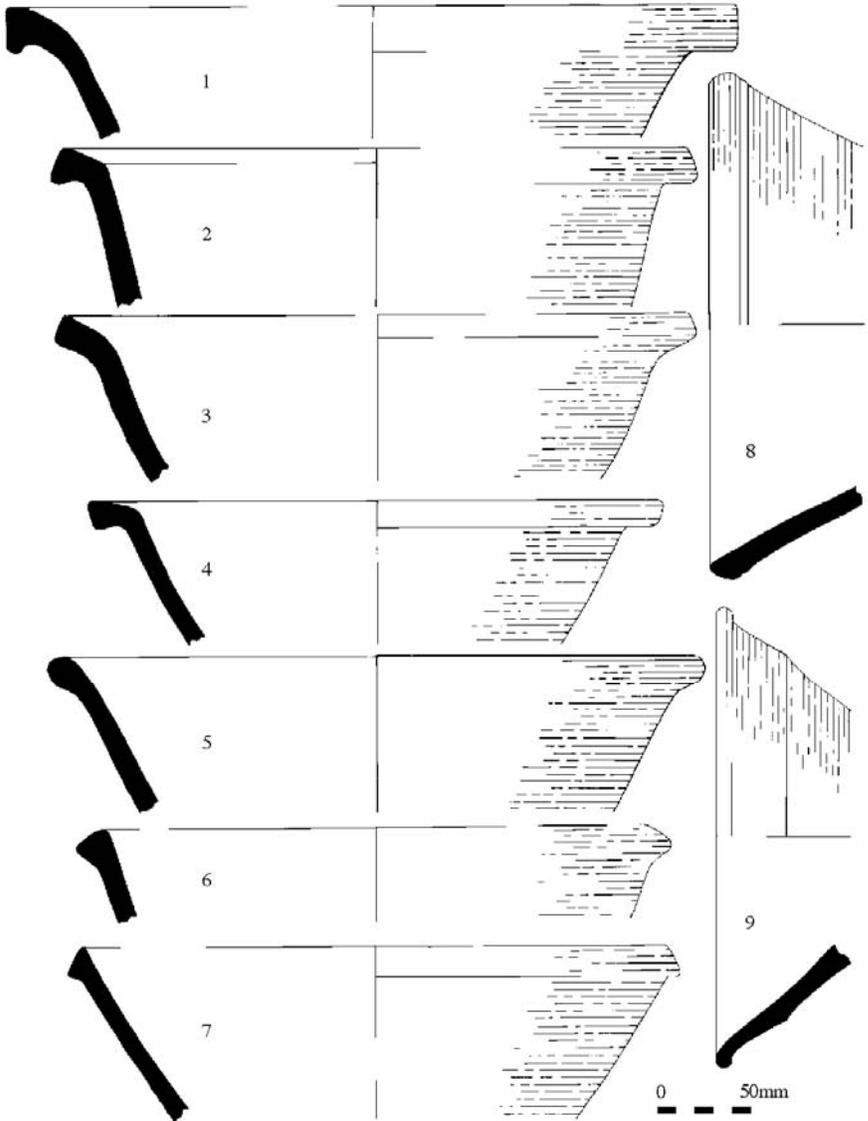
Catalogue Page 8. Unglazed wheelthrown wares: storage jars



Catalogue Page 9. Unglazed wheelthrown wares: storage jars



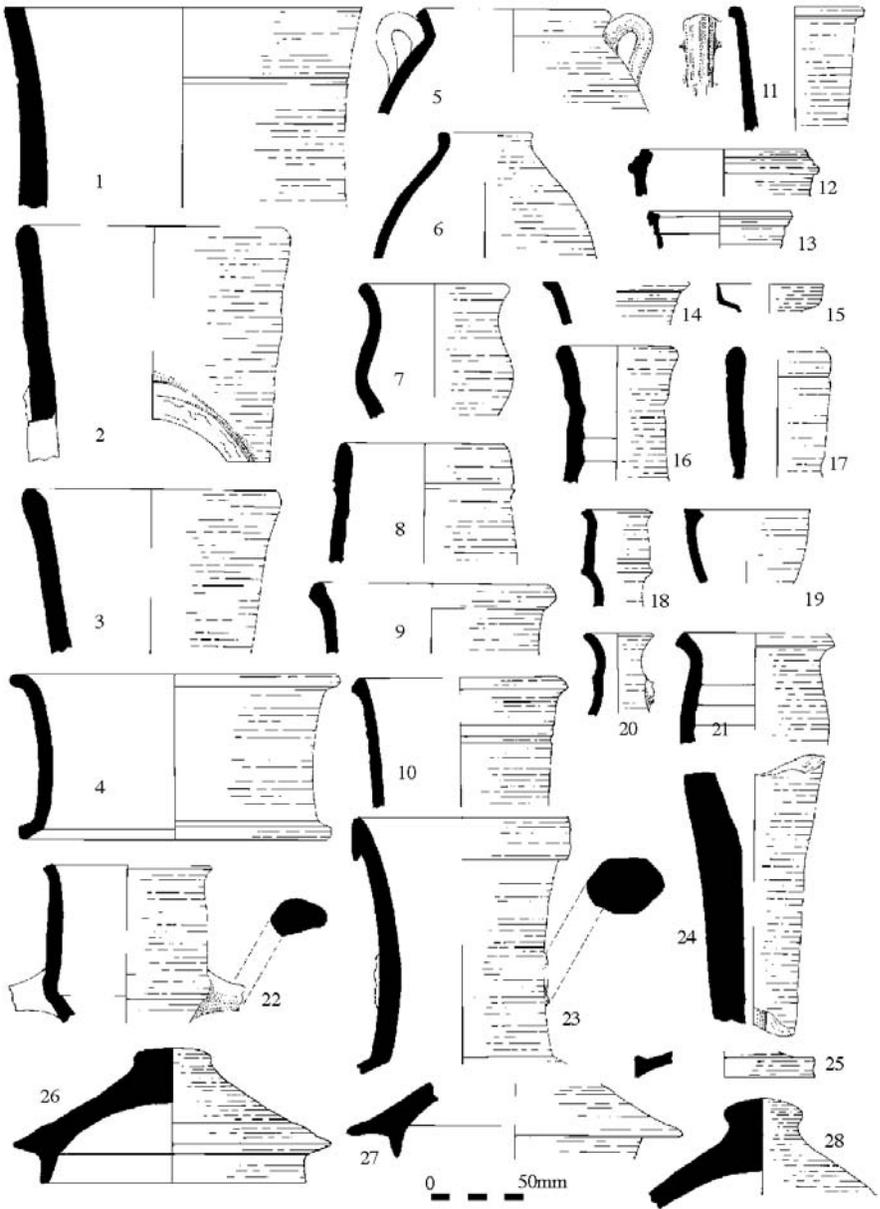
Catalogue Page 10. Unglazed wheelthrown wares: basins and sugar pots



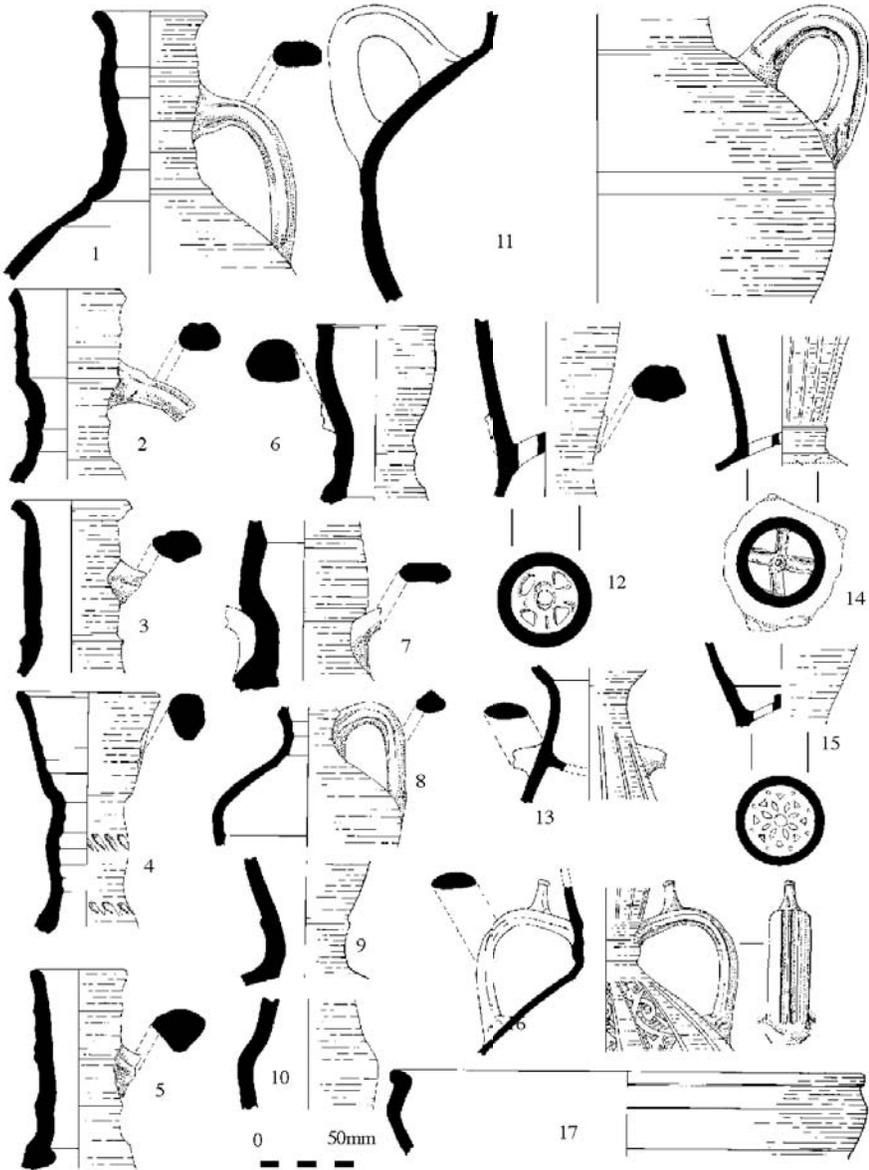
Catalogue Page 11. Unglazed wheelthrown wares: sugar pots



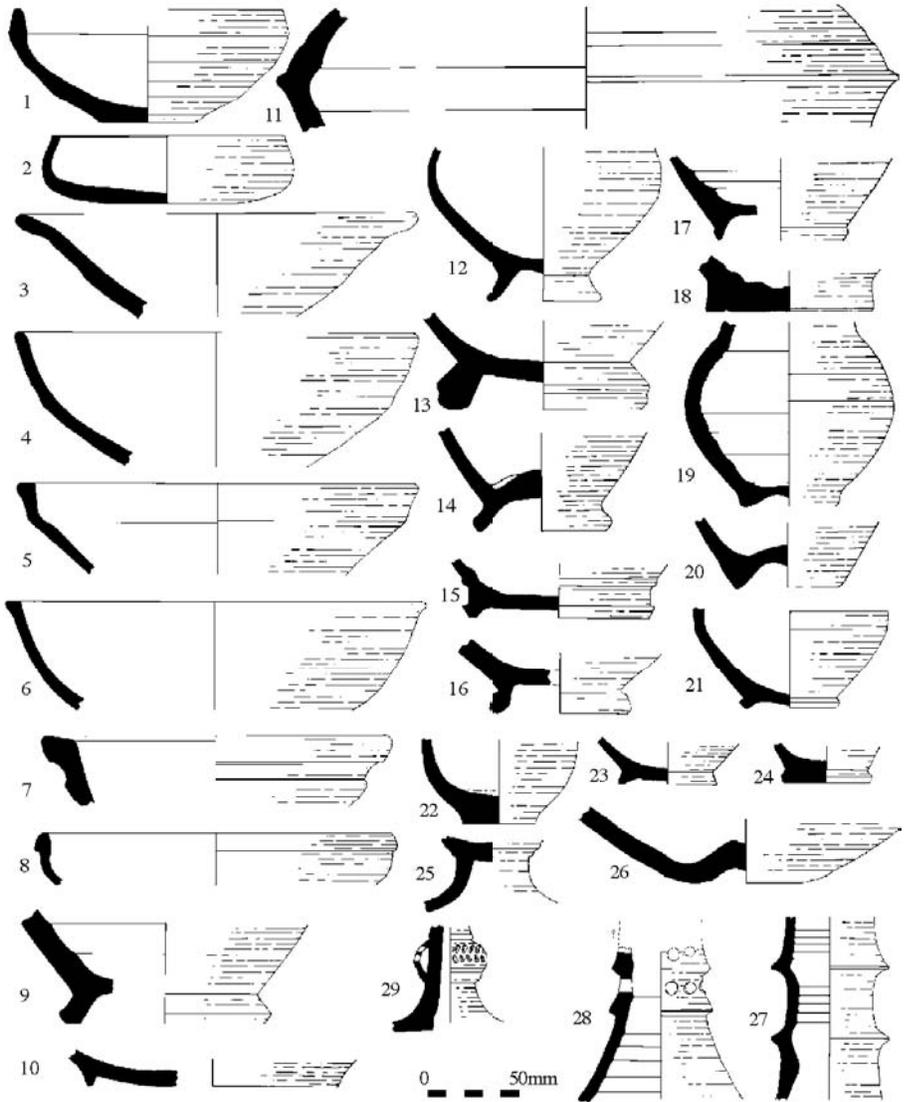
Catalogue Page 12. Unglazed wheelthrown wares: syrup jars and drainpipes



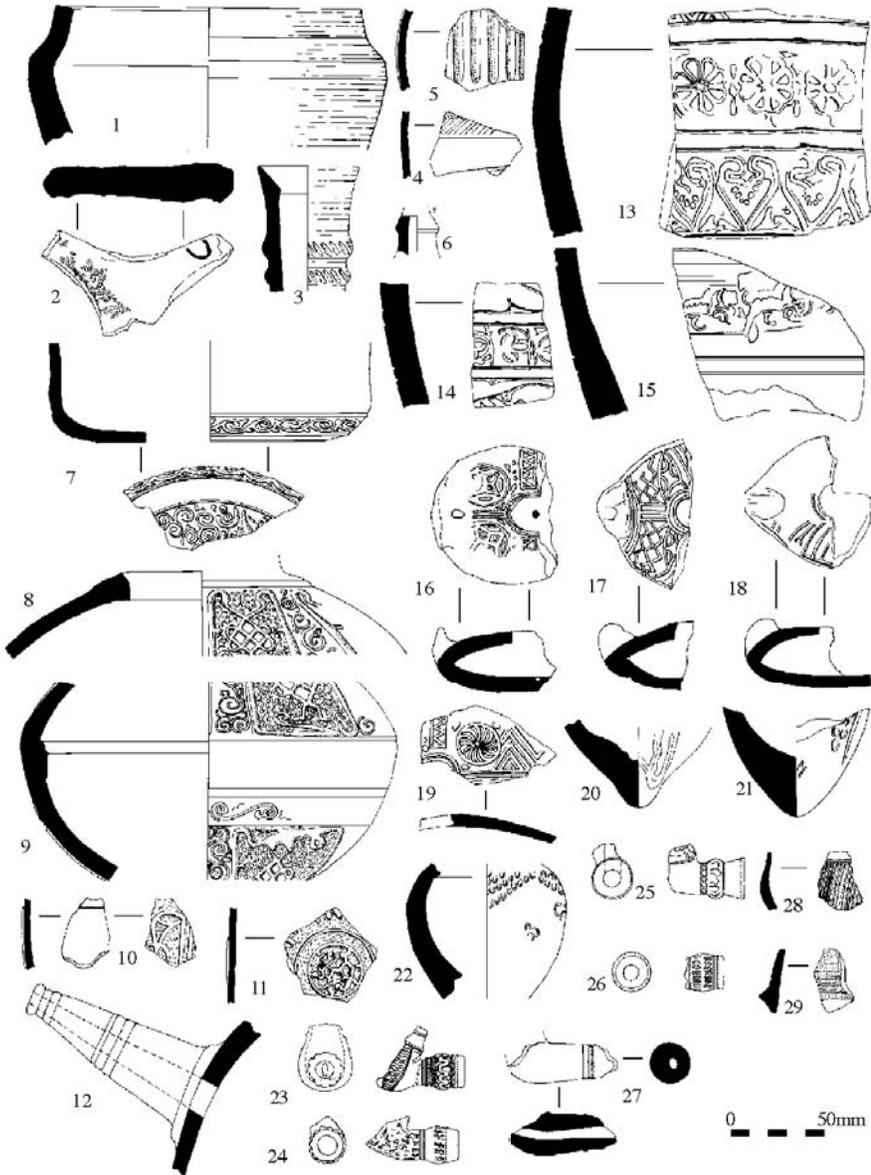
Catalogue Page 13. Unglazed wheelthrown wares: drainpipes, jugs, jars, and lids



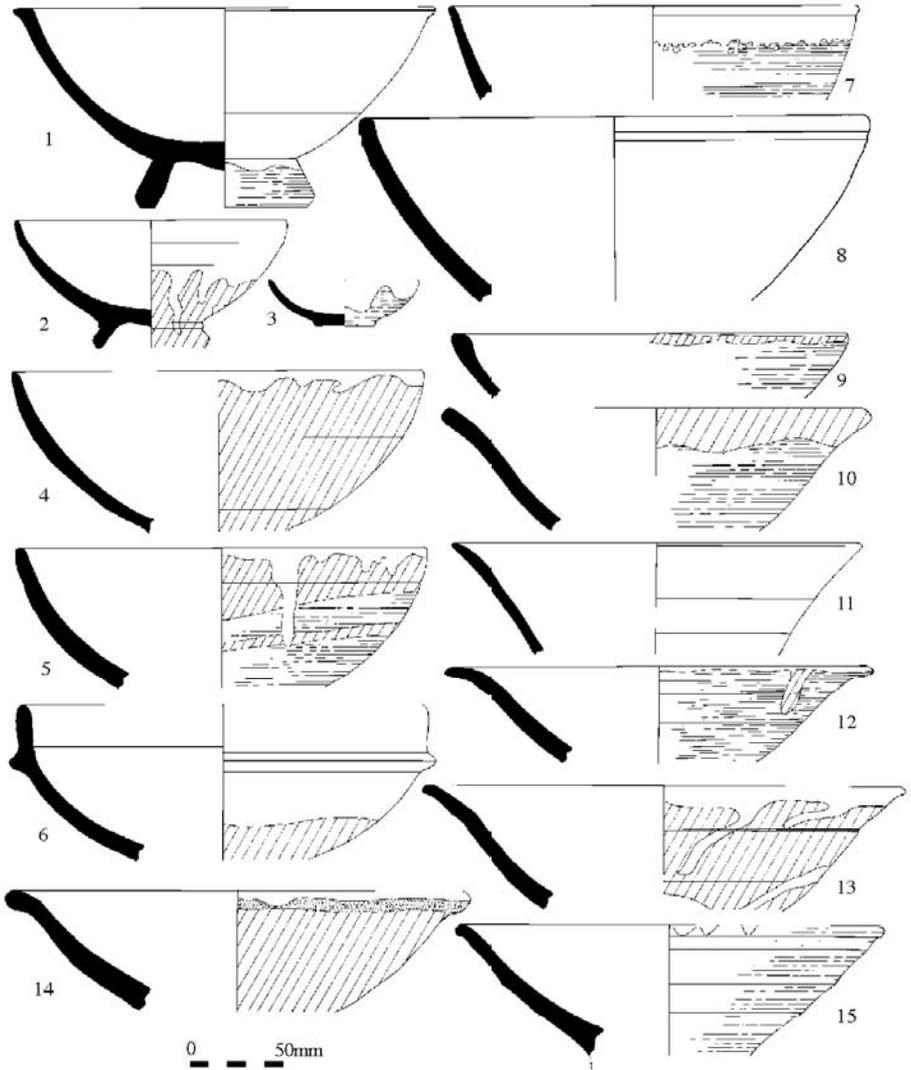
Catalogue Page 14. Unglazed wheelthrown wares: jugs, jars, and bowls



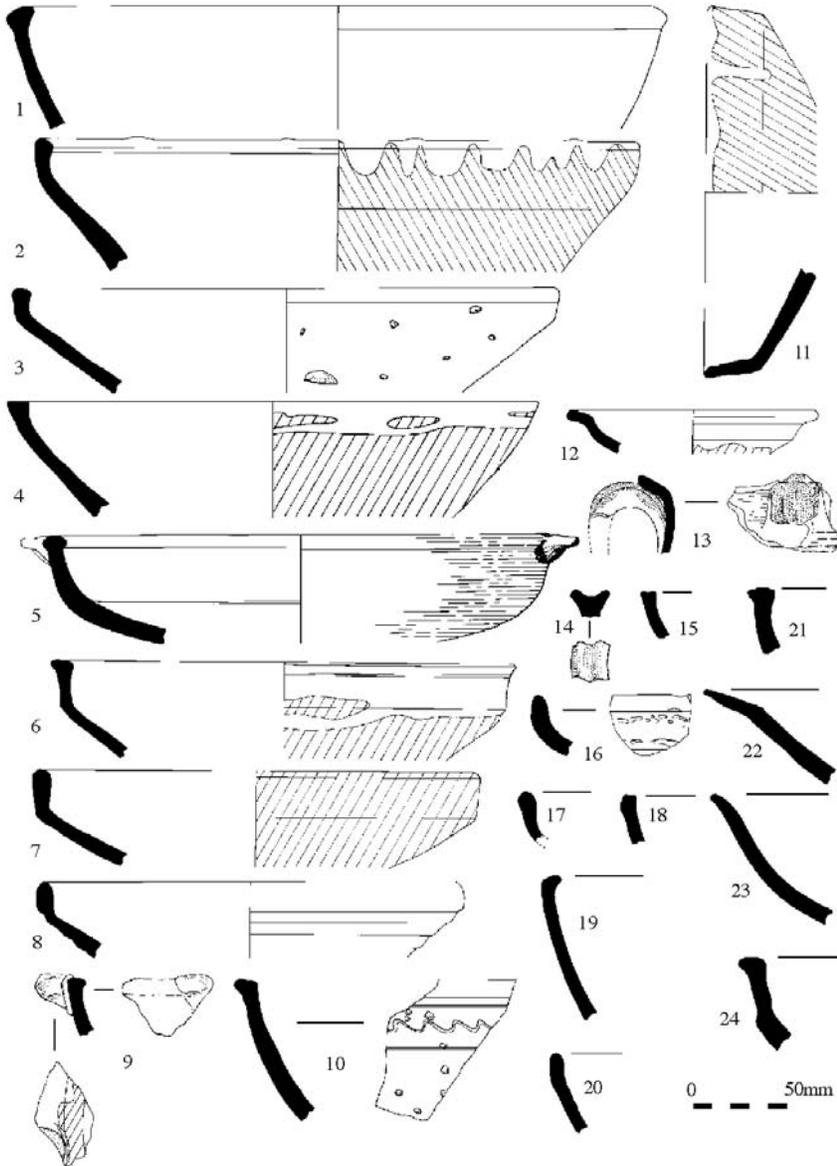
Catalogue Page 15. Unglazed wheelthrown wares: bowls, closed vessels, and pipes



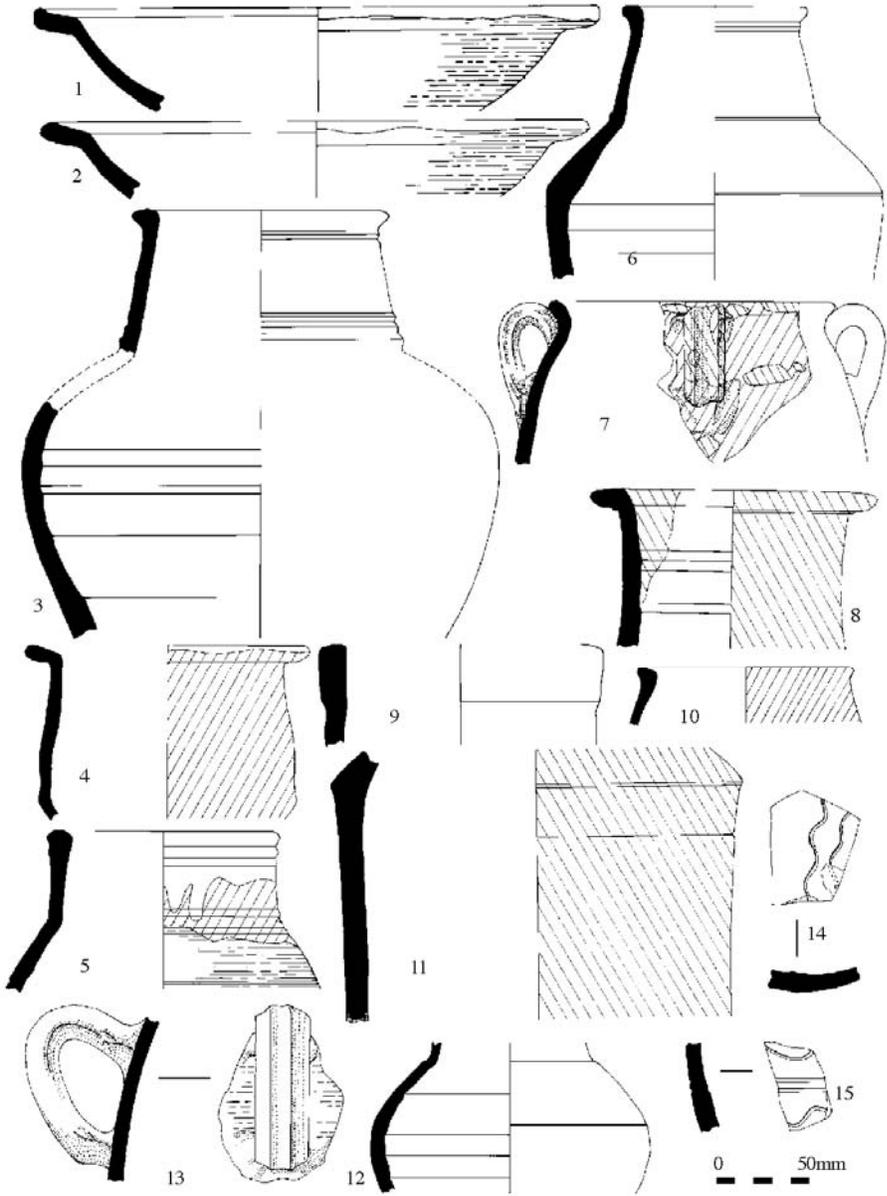
Catalogue Page 16. Unglazed wheelthrown wares (1-6), unglazed relief-moulded and stamped wares (7-29)



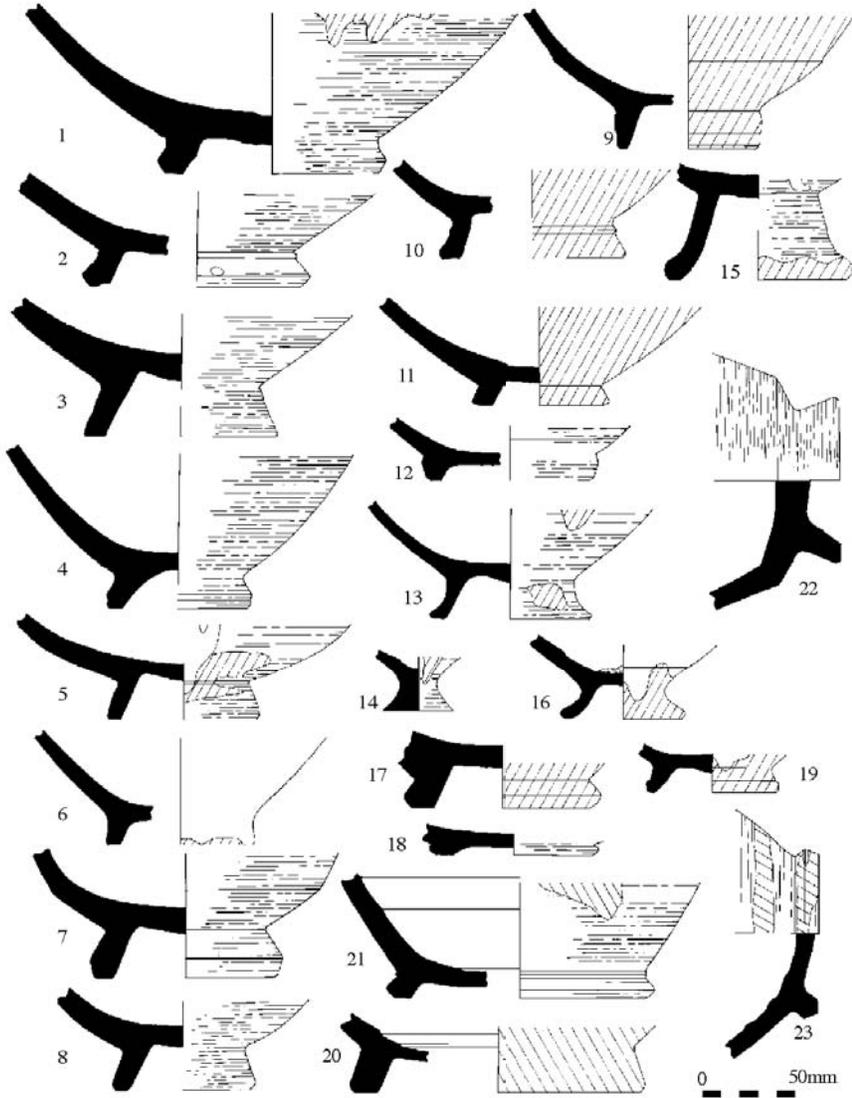
Catalogue Page 17. Plain lead-glazed wares: bowls



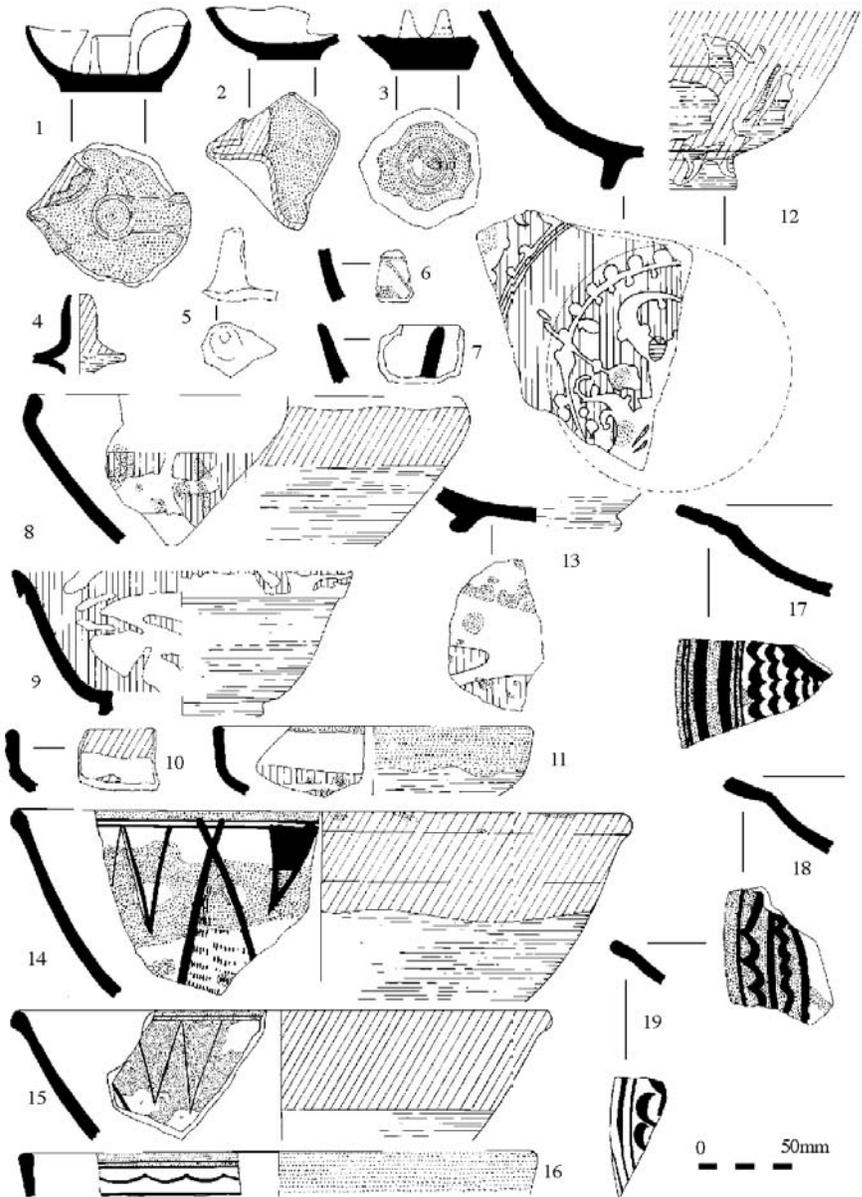
Catalogue Page 18. Plain lead-glazed wares: bowls and pans



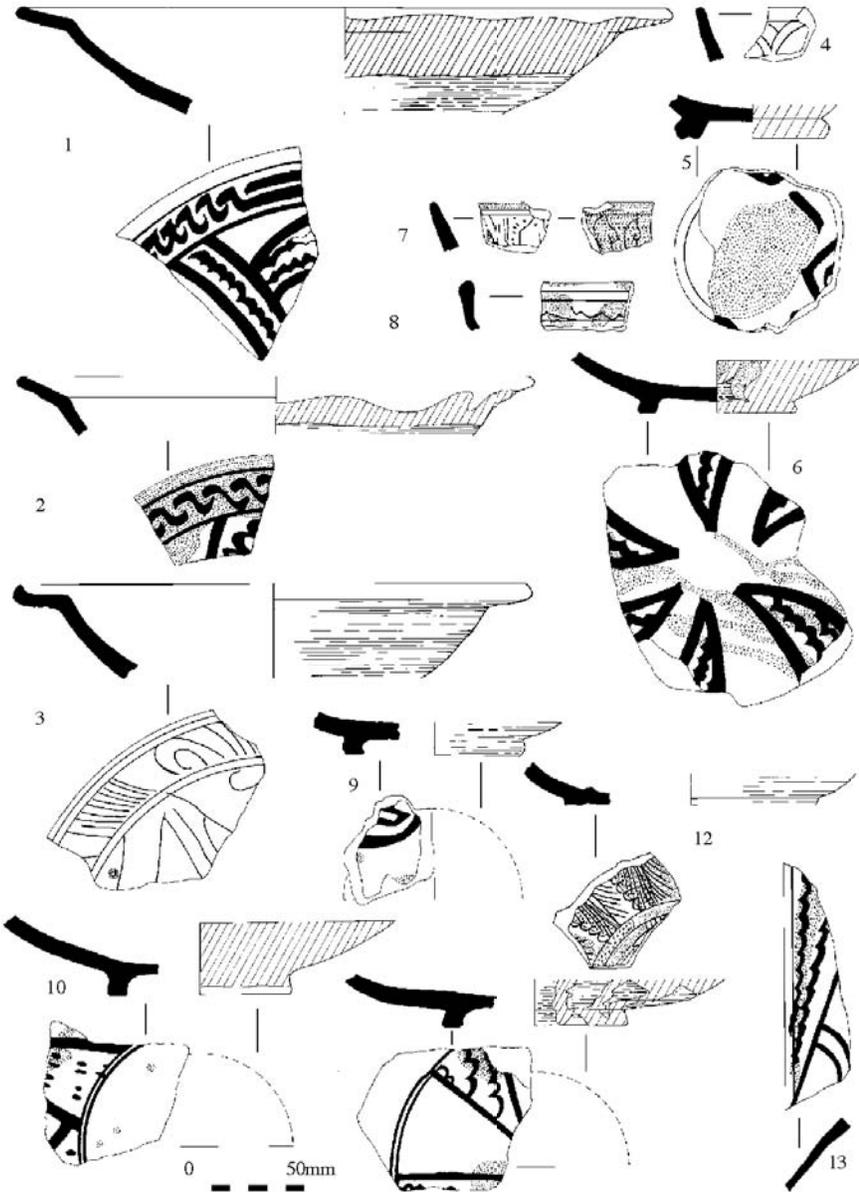
Catalogue Page 19. Plain lead-glazed wares: bowls and closed vessels



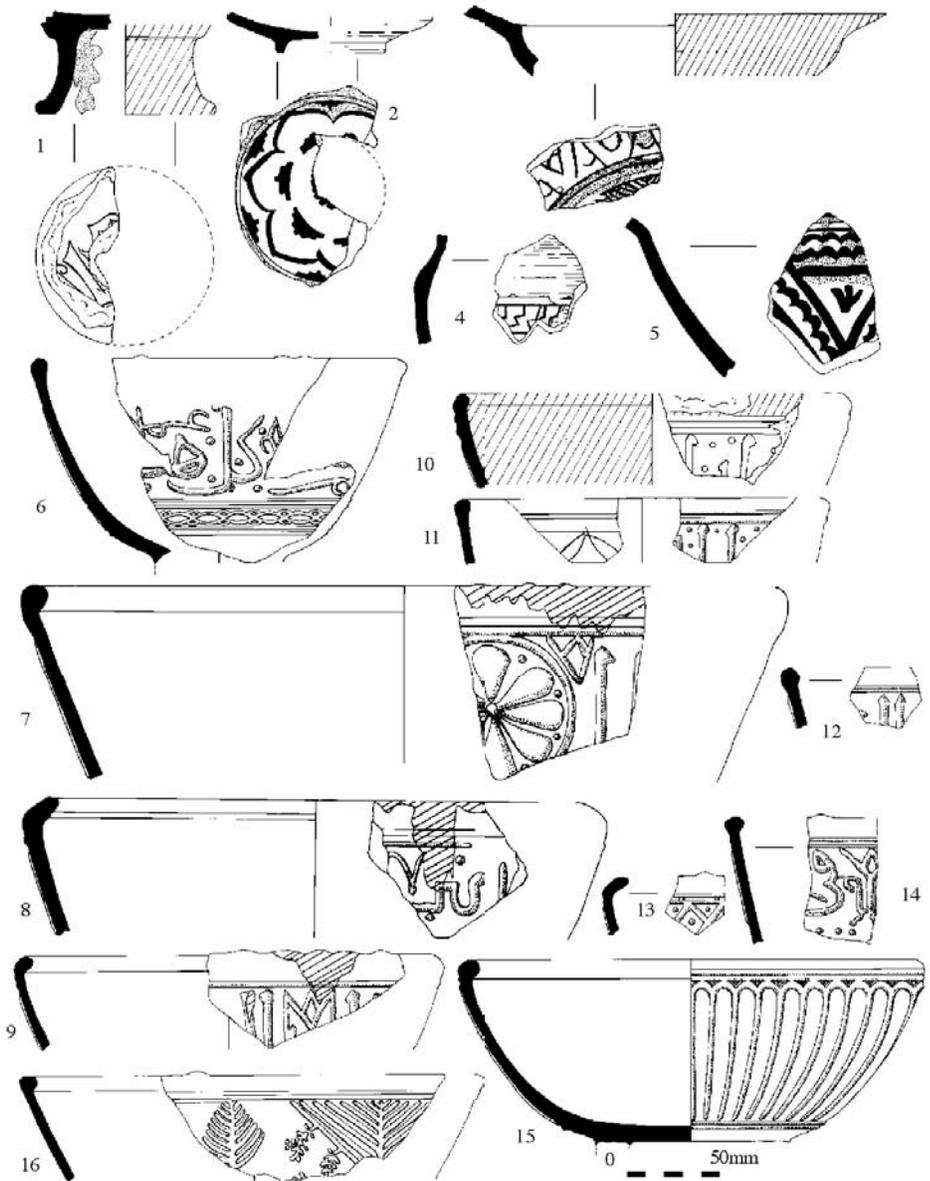
Catalogue Page 20. Plain lead-glazed wares: bowls and closed vessels



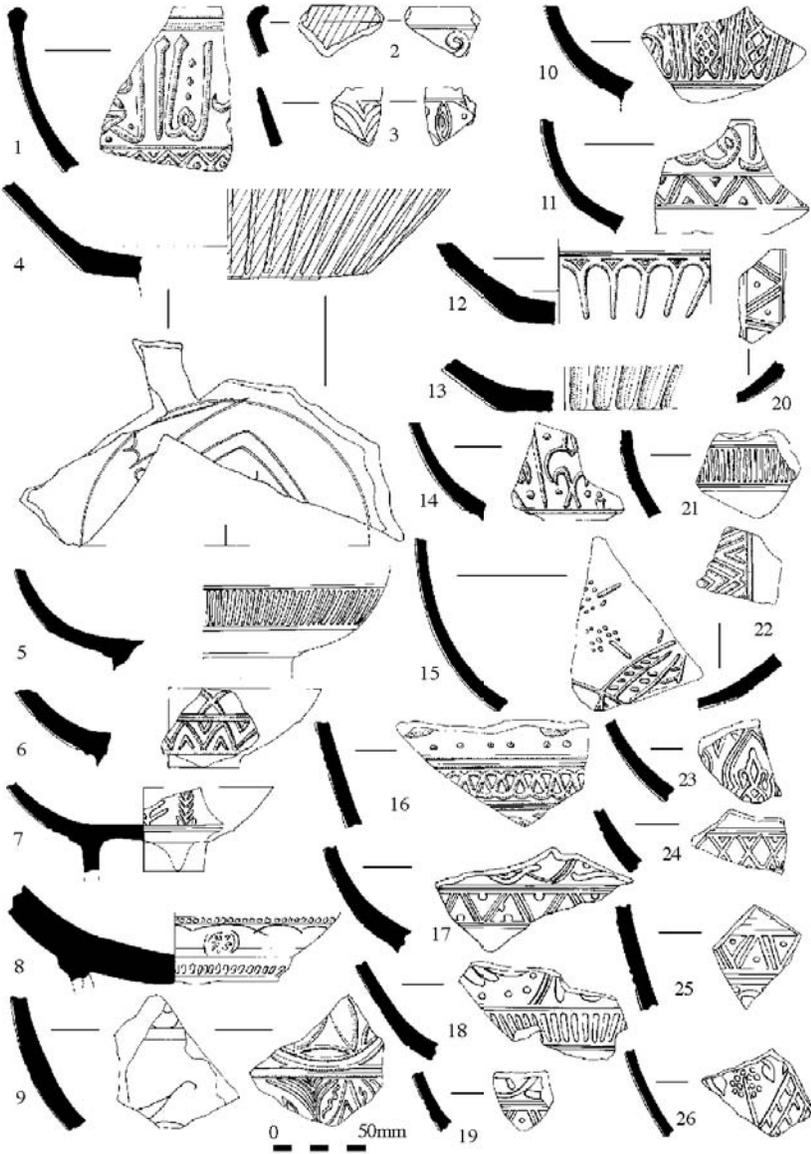
Catalogue Page 21. Plain lead-glazed lamps (1-6), slip-painted lead-glazed ware (7-13), and sgraffito ware (14-19)



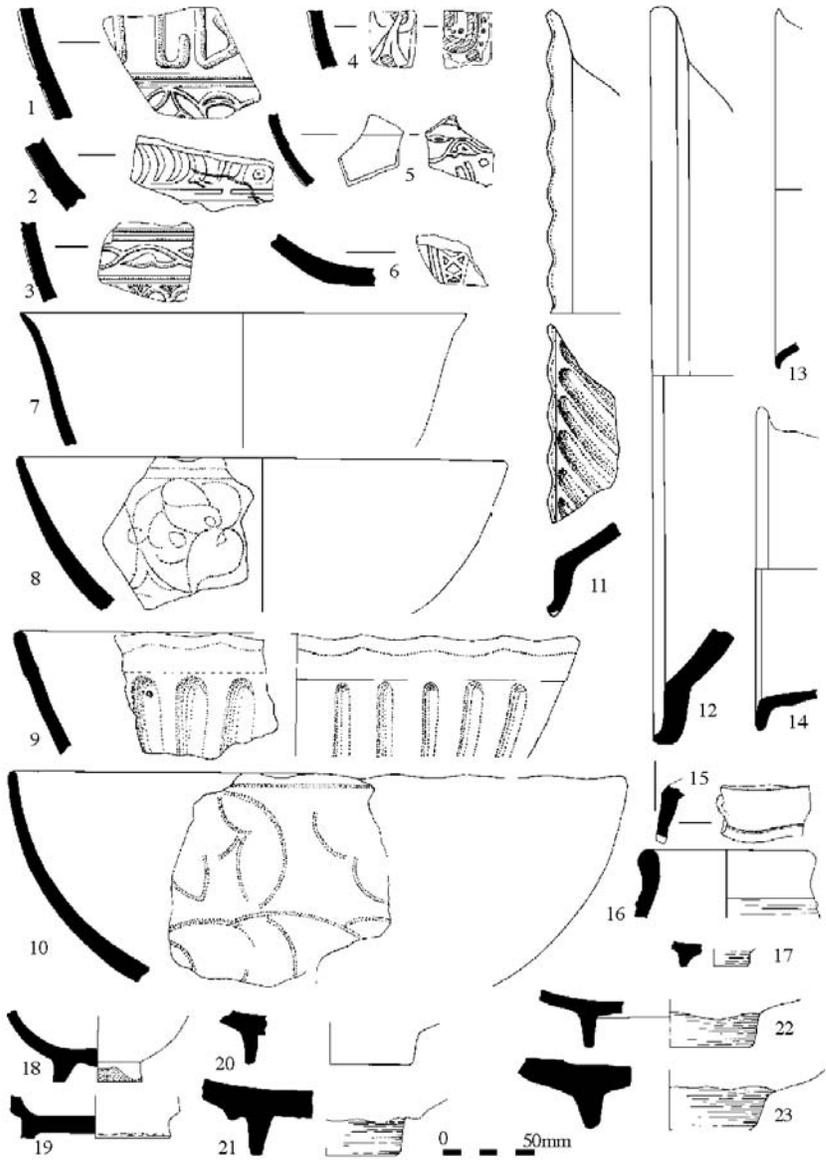
Catalogue Page 22. Sgraffito ware



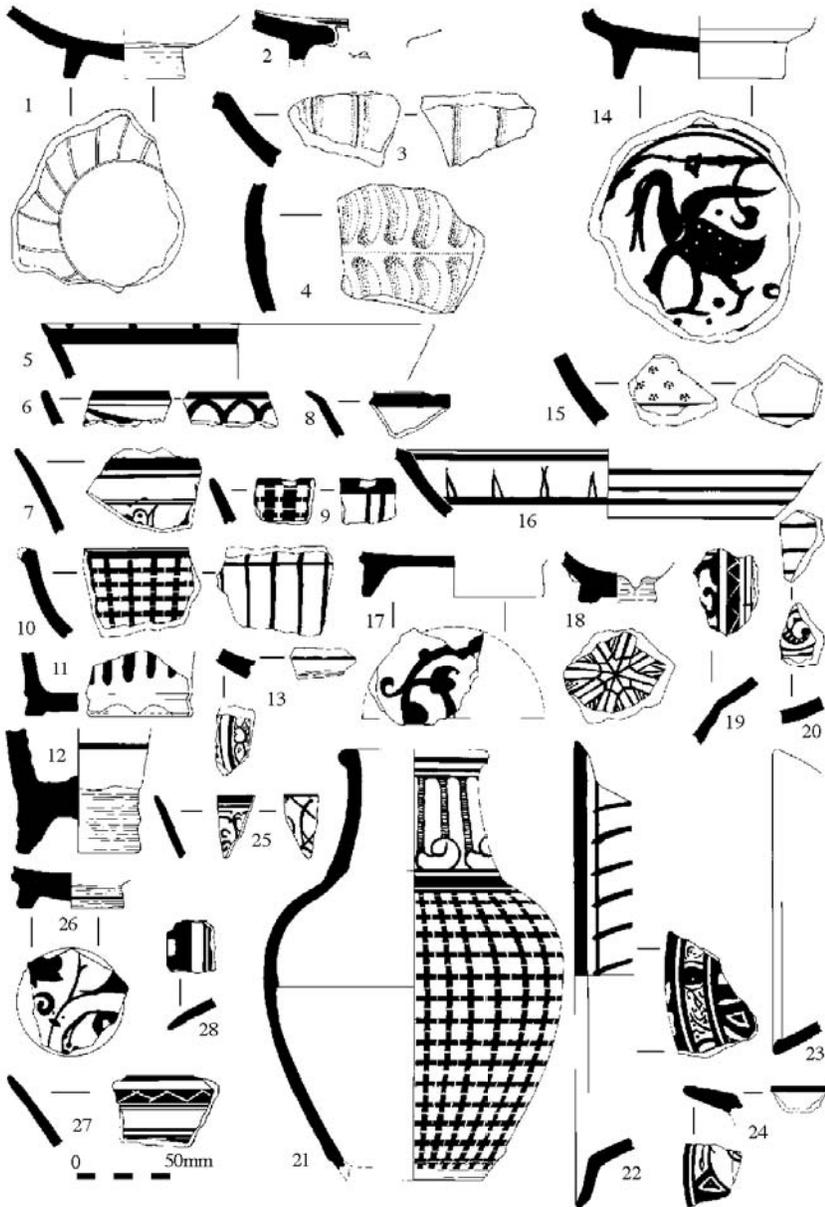
Catalogue Page 23. Sgraffito (1–5) and relief-moulded lead-glazed ware (6–16)



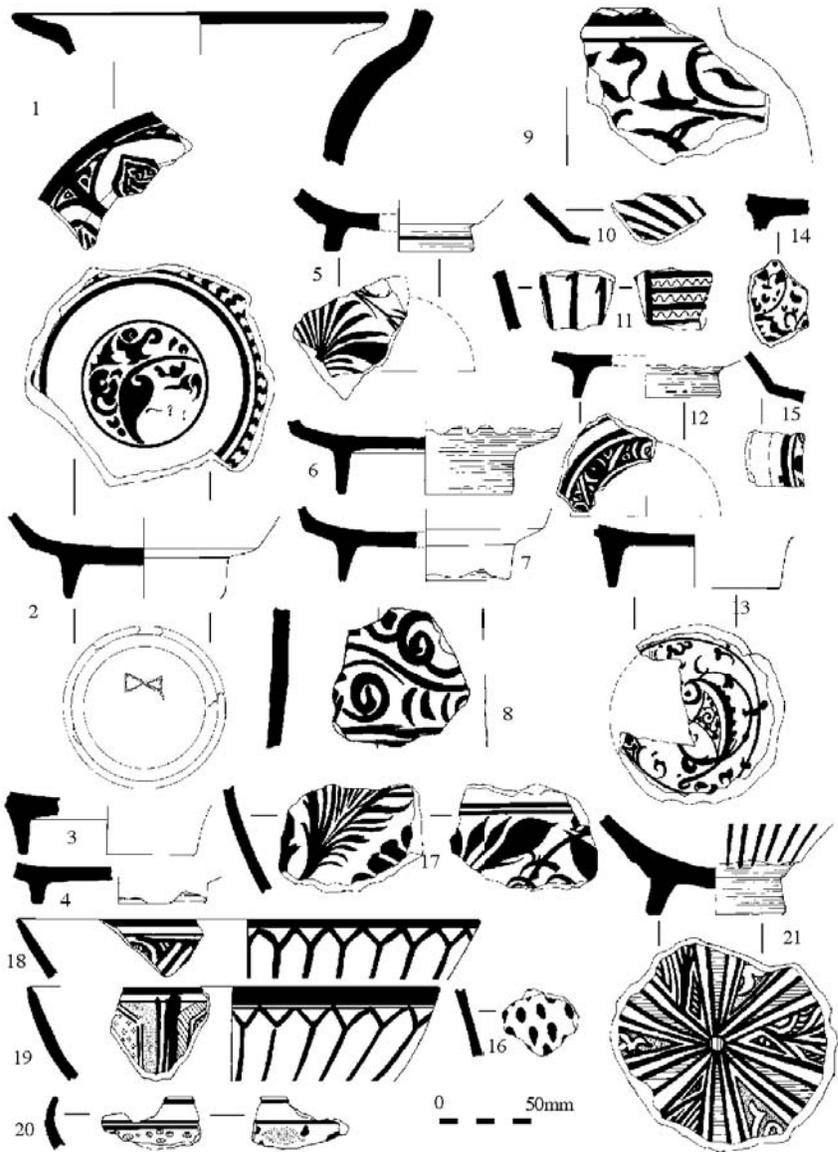
Catalogue Page 24. Relief-moulded lead-glazed ware



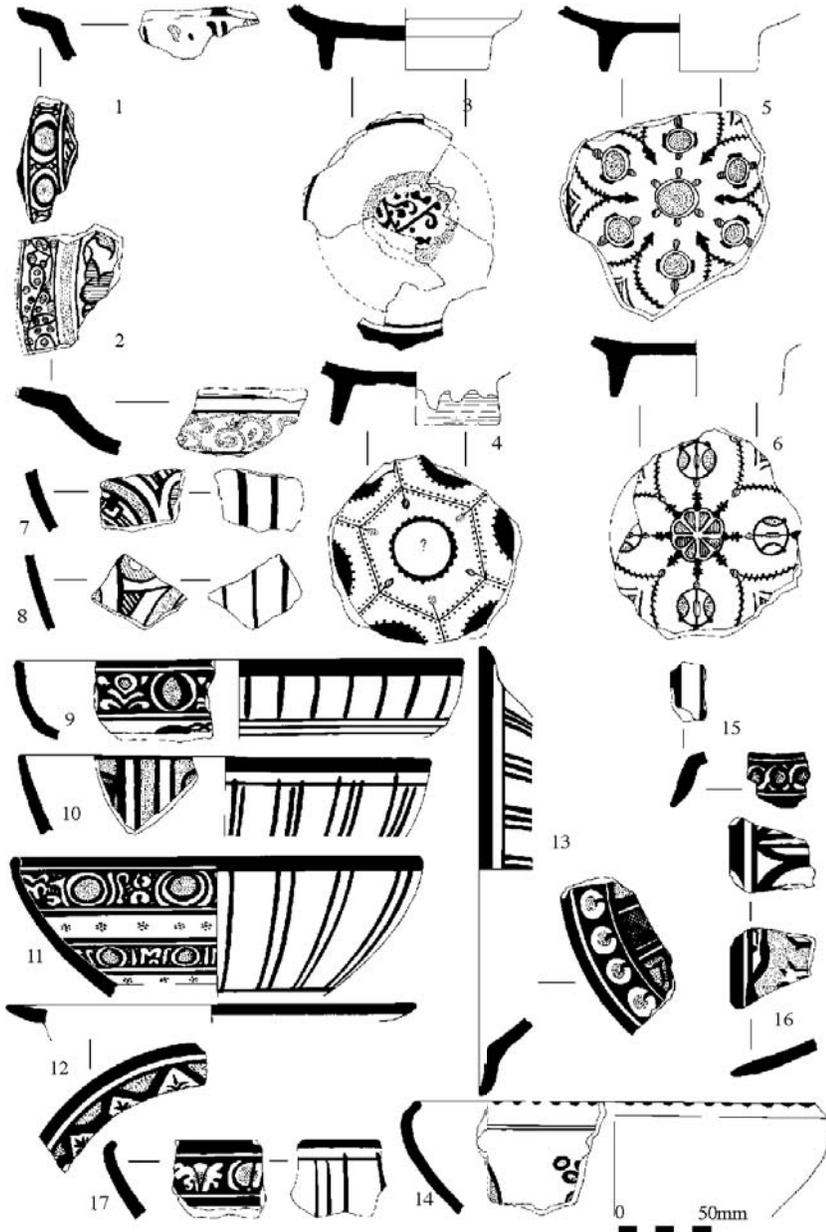
Catalogue Page 25. Relief-moulded lead-glazed (1-6) and plain alkaline-glazed ware (earthenware and stonepaste) (7-23)



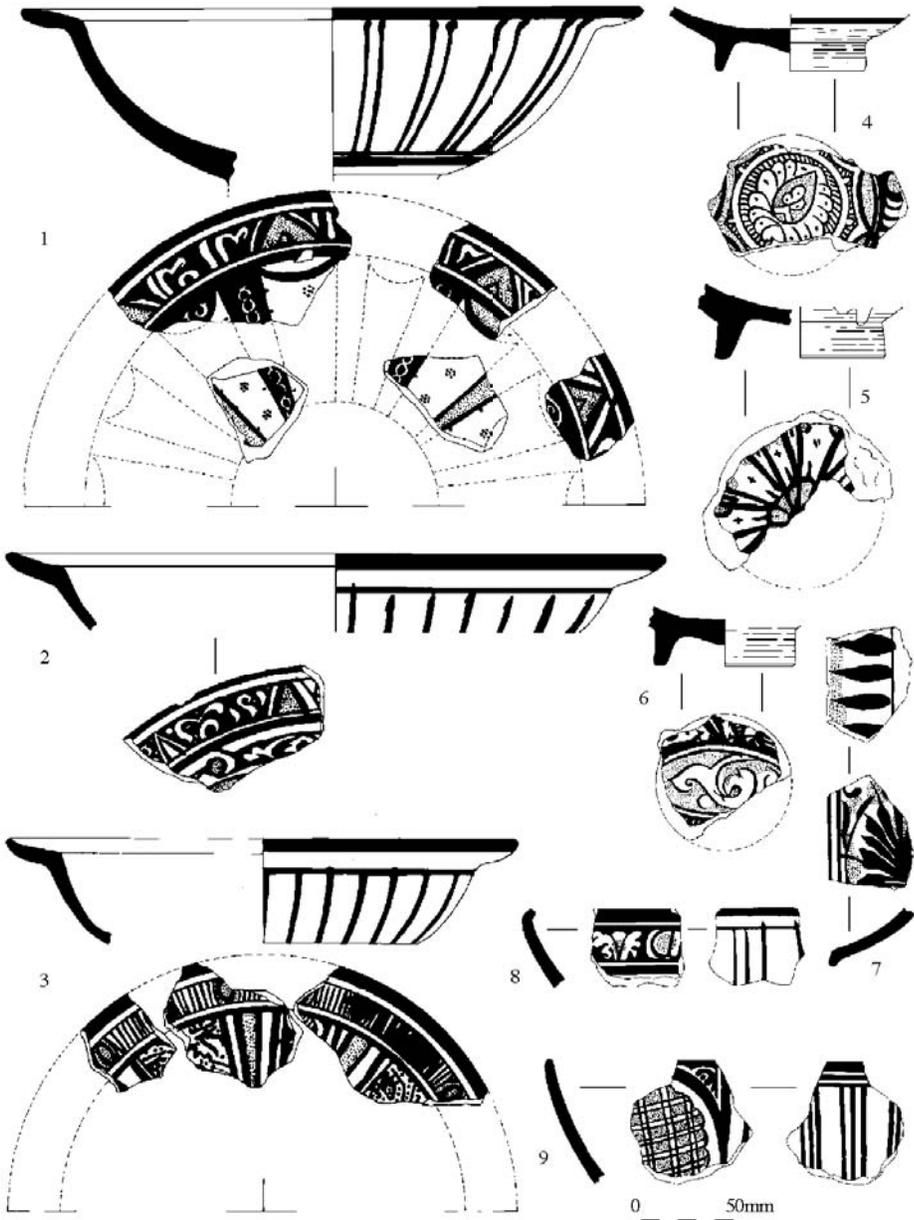
Catalogue Page 26. Plain alkaline-glazed ware (1-4), black under colourless glaze ware (5-20), and black under turquoise glaze ware (21-24)



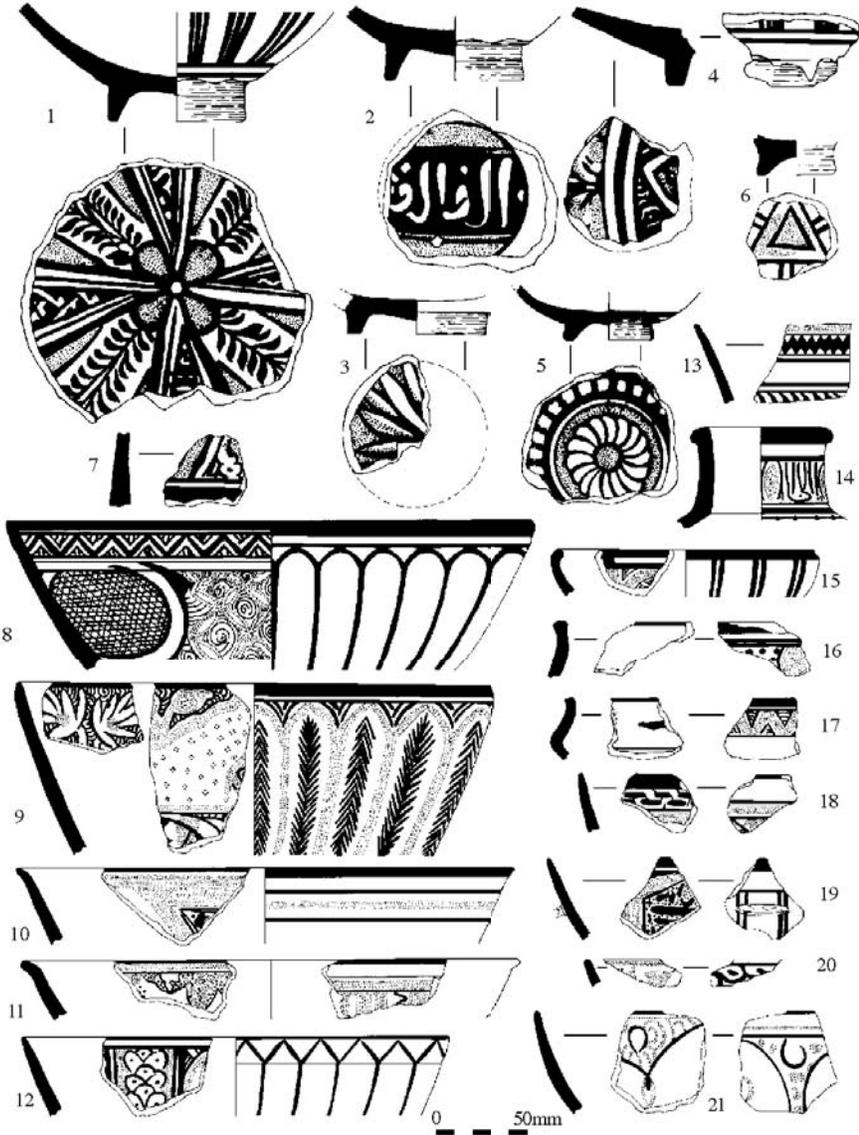
Catalogue Page 27. Black under turquoise glaze ware (1–20) and polychrome underglaze-painted ware (21)



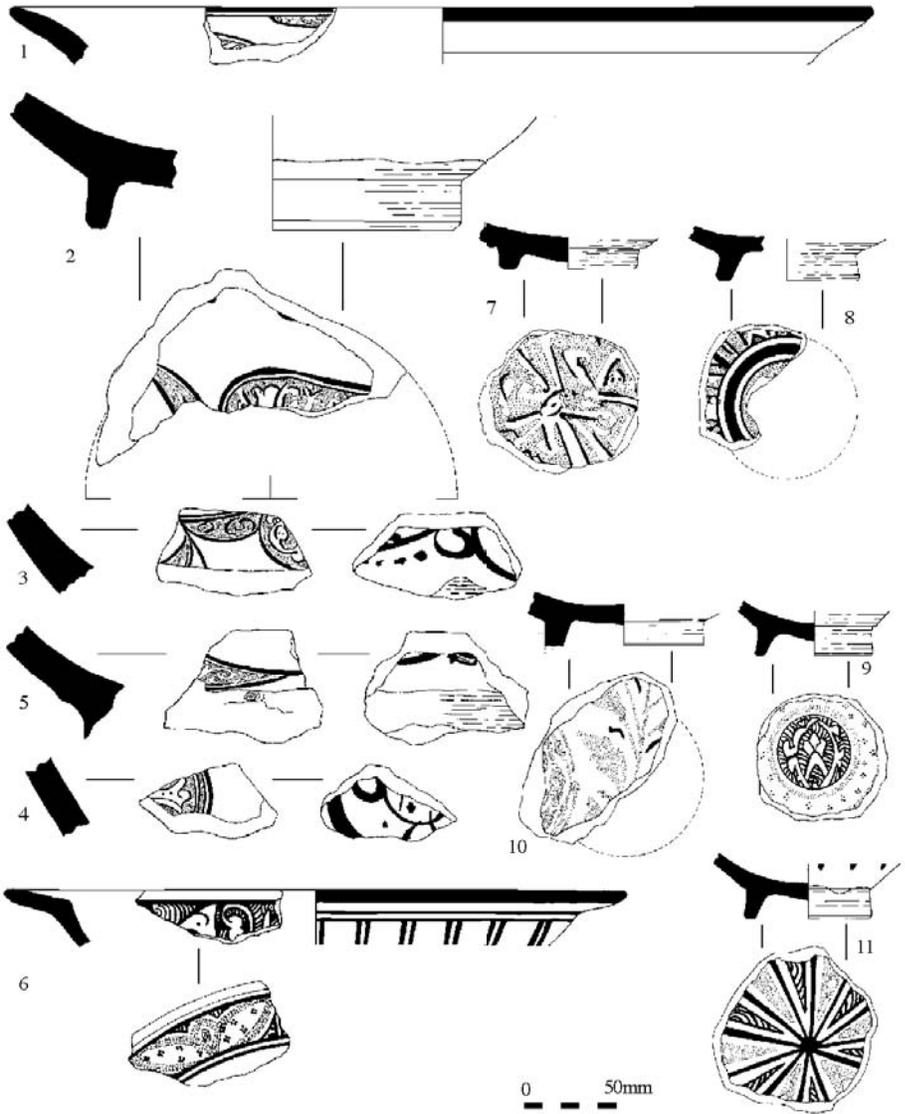
Catalogue Page 28. Polychrome underglaze-painted ware (1-8) and turquoise and black ware (9-17)



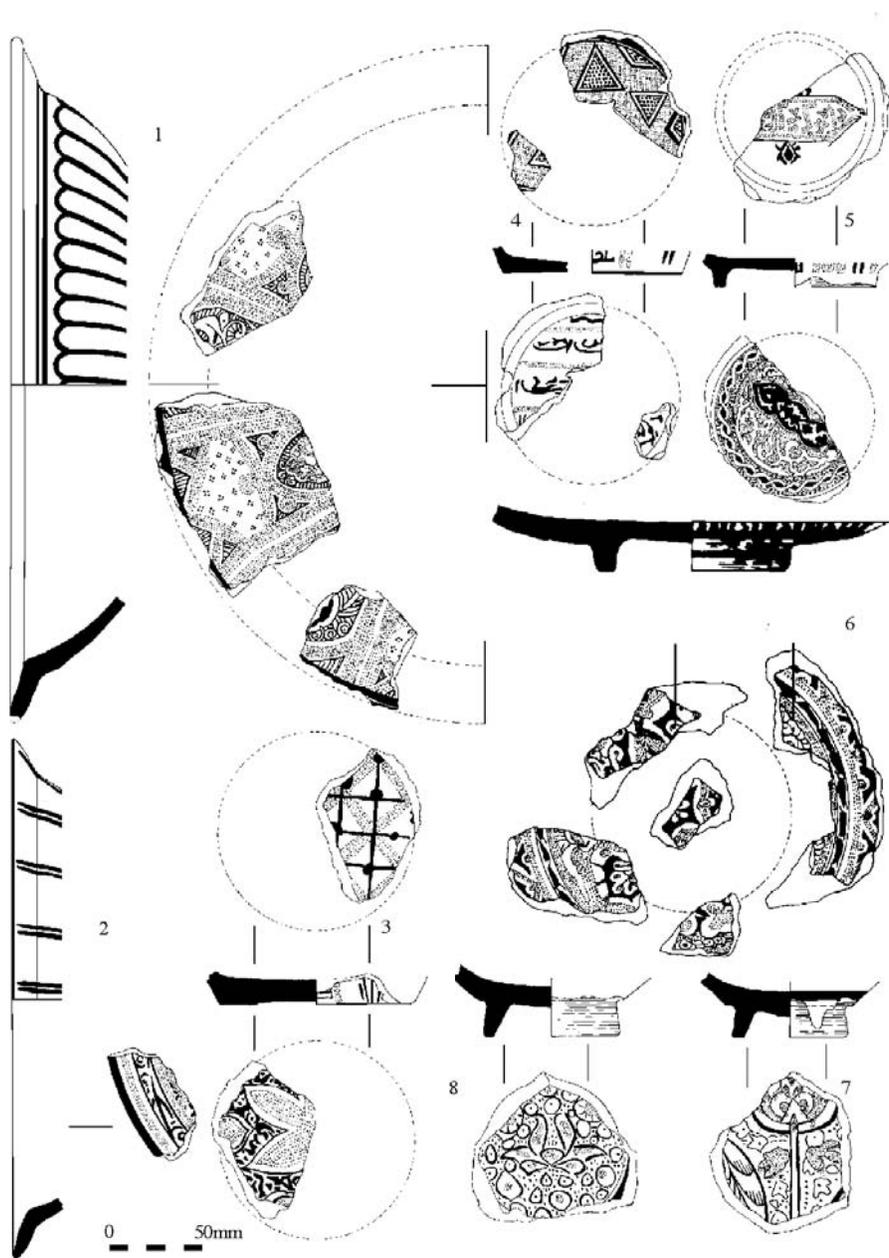
Catalogue Page 29. Turquoise and black ware



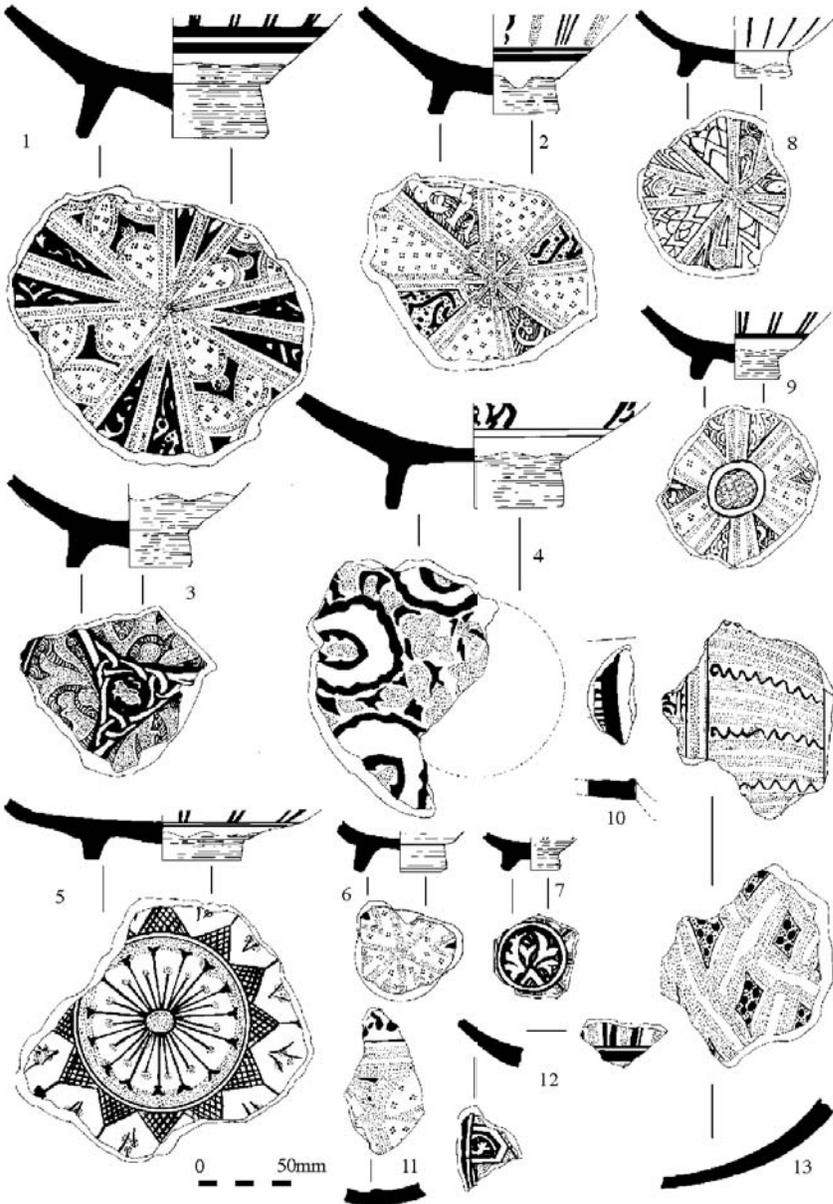
Catalogue Page 30. Turquoise and black ware (1-7) and blue and black ware (8-21)



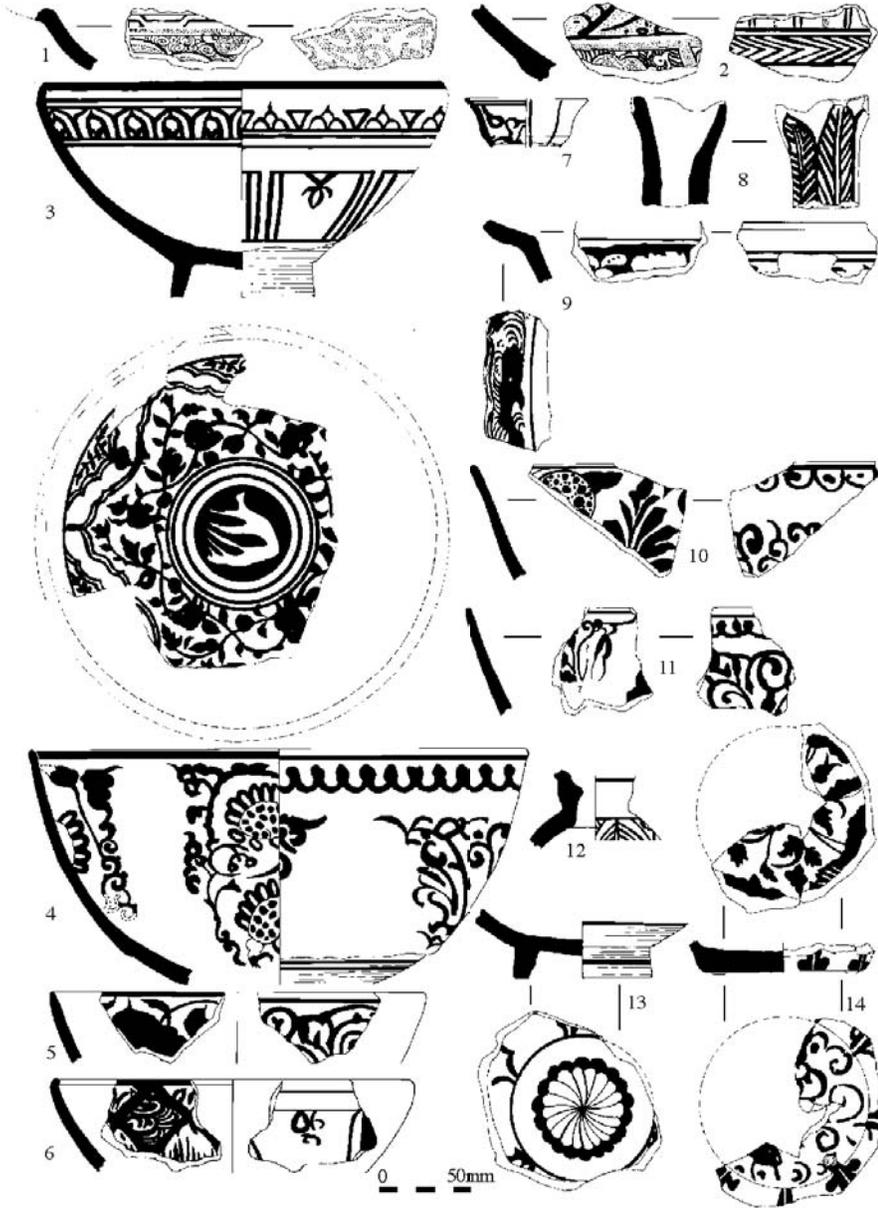
Catalogue Page 31. Blue and black ware



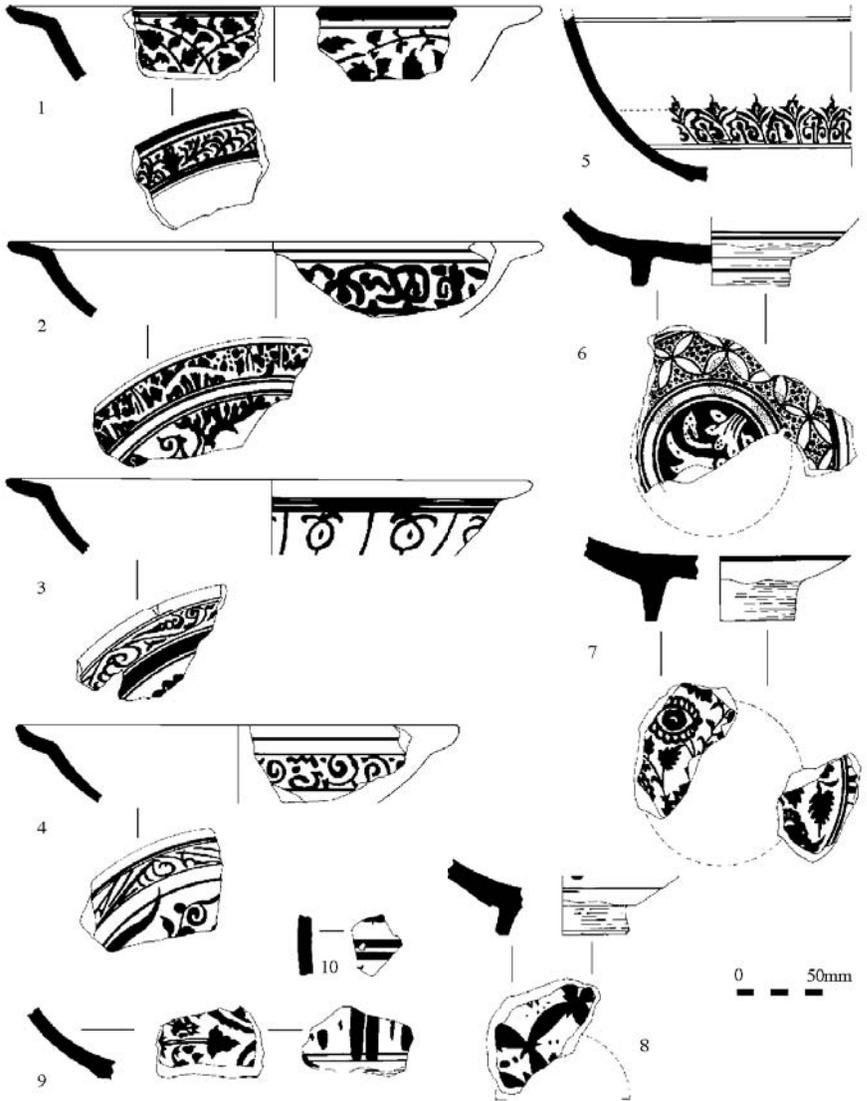
Catalogue Page 32. Blue and black ware



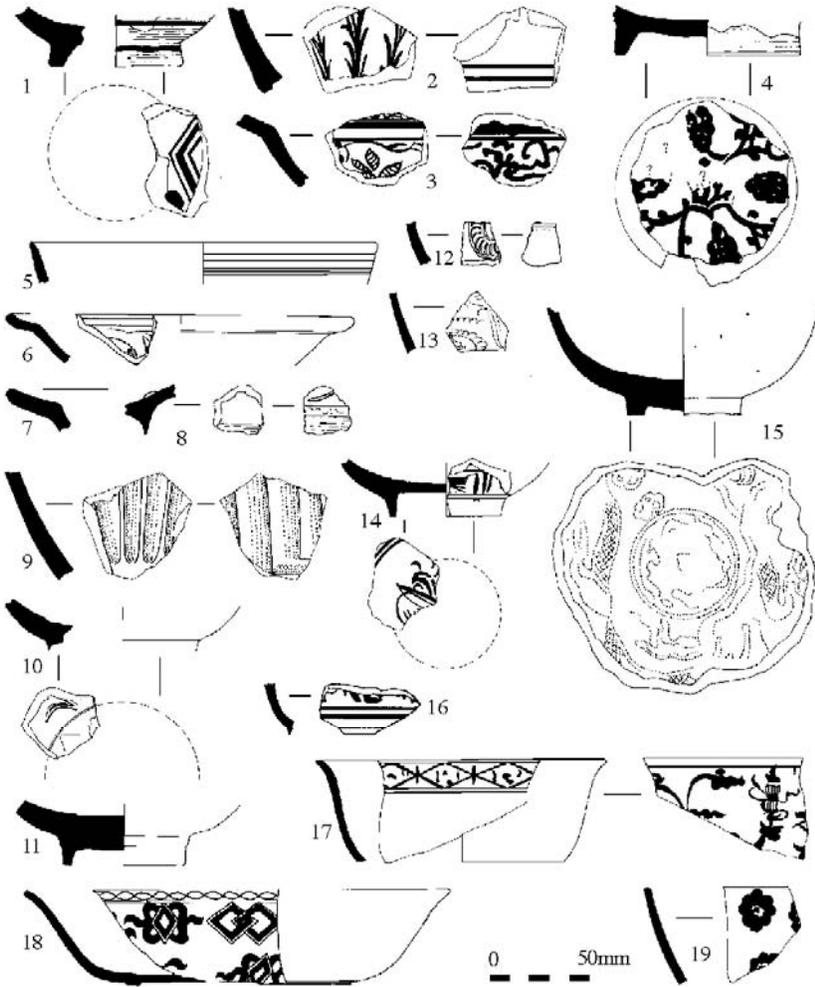
Catalogue Page 33. Blue and black ware



Catalogue Page 34. Blue and black ware (1-2) and blue and white ware (3-14)



Catalogue Page 35. Blue and white ware



Catalogue Page 36. Blue and white ware (1-3), lustre-painted ware (4), celadon (5-11), Chingpai ware (12-13), Shufu ware (15), blue and white porcelain (14, 16-19)

APPENDIX TWO

IDENTIFICATIONS OF SITES

Notes

With some exceptions, the modern Arabic name has been employed in the main text of the book and the appendices. Alternative names are also given in the following list. For more comprehensive information on the toponyms used during the Crusader period, see Pringle (1993–, 1997). The following abbreviations are given for the alternative names of sites:

- An. Ancient name
- Ar. Arabic name
- H. Modern Hebrew name
- Cr. Crusader name
- T. Modern Turkish name
- Sp. Spelling unclear

The publications list below each site are those that have been employed in this study. For more extensive lists of relevant archaeological publications, see Pringle (1981); Tonghini and Grube (1989); Herr and Trenchard (1996); Milwright (2000, 2001).

Archaeological Sites (figures 7 & 8)

1. Abū Ghawsh
Alternatives: Abū Ghūsh (Ar.)
Publications: De Vaux and Steve (1950)

2. Abū Thawab
Publications: Coughenour (1976)

3. Afāmiyya

Alternatives: Apamea (An.)

Publications: Rogers (1972, 1984).

4. ‘Afūla

Publications: Dothan (1955)

5. ‘Akka

Alternatives: ‘Akkā (Ar.), Acre (Cr.), ‘Akko (H.)

Publications: Edelstein and Avissar (1997); Stern (1997); Pringle (1997b)

6. Aleppo

Alternatives: Halab (Ar.)

Publications: Kühnel (1938); Atil (1981); Gonnella (2000, 2006)

7. ‘Ammān

Publications: Bennett (1979); ‘Amr (1984); Hadidi (1989); Abdul Sami‘ *et al.* (1991); Northedge (1992); Khadija (1992)

8. Antioch

Alternatives: Anṭākiyya (Ar.), Antakya (T.)

Publications: Waagé (1948)

9. ‘Arā‘īr

Publications: Olavarri (1965)

10. Arsūr

Alternatives: Arsūf, Apollonia (An.)

Publications: Roll and Ayalon (1982)

11. ‘Asqalān

Alternatives: Ascalon (An.)

Publications: Frierman (1969)

12. ‘Athlīth

Alternatives: ‘Atlīt (H.), Pilgrims’ Castle (Cr.)

Publications: Johns (1934a, 1934b, 1935)

13. Ayla (‘Aqaba)

Publications: Whitcomb (1987, 1988a, 1988b, 1990–91)

14. ʿAyn Kārim

Publications: Saller (1946); Bagatti (1948)

15. ʿAyn Shams

Publications: Grant and Wright (1938–39)

16. ʿAyzariyya

Alternatives: Bethany (An.)

Publications: Saller (1957)

17. Baʿalbak

Alternatives: Baʿlabakk (Ar.)

Publications: Sarre (1925)

18. Bālis

Alternatives: Meskeneh (An.)

Publications: Golvin (1980); Raymond and Paillet (1995)

19. Bāniyās

Alternatives: Banyās (Ar.), Baniyas (H.)

Publications: Tzaferis and Muttat (1987–88)

20. Batin (sp.)

Publications: Mayer (1934)

21. Baysān

Alternatives: Scythopolis (An.), Beth Shan, Bet Sheʿan (H.)

Publications: Fitzgerald (1931); Zori (1966); Mazar (1995); Seligman (1996); Hadad (1999)

22. Bayt Sāḥūr

Alternatives: Shepherds' Field

Publications: Tzaferis (1975)

23. Bayt Shaʿarim (sp.)

Alternatives: Beth Sheʿarim (H.)

Publications: Avigad (1971)

24. Bet Guvrin (H.)

Publications: Kloner and Cohen (1998)

25. Beirut

Alternatives: Bayrūt (Ar.)

Publications: Turquety-Pariset (1982); Anon (1995)

26. Burj al-Aḥmar

Alternatives: Red Tower

Publications: Pringle (1986a)

27. Buṣrā

Alternatives: Bosra (An.)

Publications: Berthier (1985); Bresenham (1985)

28. Caesarea (An.)

Alternatives: Qayṣāriyya (Ar.)

Publications: Pringle (1985); Brosh (1986); Boas (1992)

29. Damascus

Alternatives: Dimashq (Ar.)

Publications: Migeon (1923); Contenau (1924); Sauvaget (1932); al-ʿUsh (1960, 1961–62, 1963); Toueir (1973); Carswell (1972); Carswell (2000); McPhillips (2002); François (2002)

30. Dāmīya

Publications: Milwright (2004b)

31. Dayr al-Kahf

Publications: Parker (1986)

32. Dhibān

Alternatives: Dibon (An.)

Publications: Winnett and Reed (1964); Tushingam (1972); Sauer (1975)

33. Dhirāʿ al-Khān

Publications: Kareem (1992, 1998, 2000)

34. Fayfāʿ

Publications: Rast and Schaub (1974); King *et al.* (1987); MacDonald (1992)

35. Fūla

Alternatives: La Fève (Cr.)

Publications: Kedar and Pringle (1985)

36. Gharandal

Alternatives: 'Arandal (Ar.)

Publications: Walmsley and Grey (2001)

37. Ḥamā

Alternatives: Ḥamā' (Ar.)

Publications: Riis and Poulsen (1957)

38. Ḥasbān

Alternatives: Ḥisbān (Ar.), Heshbon (An.)

Publications: Sauer (1973, 1994); LaBianca and Walker (2001); Walker (2001, 2003); Walker and LaBianca (2003)

39. Ḥayfā

Alternatives: Haifa

Publications: Pringle (1984a)

40. Hūnīn

Alternatives: Margoliot (Cr.)

Publications: Shaked (1997)

41. 'Ibillīn

Publications: Petersen (1995)

42. 'Irāq al-Amīr

Publications: Brown (1979, 1983)

43. Jabal al-Ṭūr

Alternatives: Mount Tabor

Publications: Battista and Bagatti (1976)

44. Jarābulus Taḥtānī

Publications: Peltenburg *et al.* (1995)

45. Jarash

Alternatives: Gerasa (An.), Jerash

Publications: 'Uways (1985); Tholbecq (2000)

46. Jerusalem

Alternatives: al-Quds (Ar.)

Publications: MacAlister and Duncan (1926); Johns (1950); Corbo (1965); Brosh and Tsafir (1977); Avigad (1978, 1983); Pringle (1984b); Tushingham (1985); Wightman (1989); Avissar (1992); Onn and Rapuono (1995); Abu Raya (1997); Prag (2006)

47. Kabri

Alternatives: al-Tall (Ar.)

Publications: Kempinski and Neimeier (1994)

48. Karak

Alternatives: Kerak, Crac de Montréal (Cr.)

Publications: Sārī (1986); Brown (1989); Mason and Milwright (1998); Milwright (1999)

49. Khalīl

Alternatives: St Abraham (Cr.), Hebron/Hevron (H.)

Publications: Bennett (1972)

50. Khān al-Aḥmar

Publications: Crowfoot (1932)

51. Khān al-‘Adhmā’

Publications: Glueck (1939)

52. Khirbat al-‘Al

Alternatives: Elealeh (An.)

Publications: Reed (1972)

53. Khirbat ‘Ayn Janīn

Publications: Hart (1987)

54. Khirbat Bayt Jīz

Publications: Amitai-Preiss (1994)

55. Khirbat Bayt Layā’

Publications: Patrīch and Tsafir (1985)

56. Khirbat Bet Zeneta (H.)

Publications: Getzov (1996)

57. Khirbat Dūḥala

Alternatives: al-Nu‘aymī (Ar.)

Publications: Sārī (1992a, 1992b)

58. Khirbat Fāris

Alternatives: Khirbat Tadūn (Ar.)

Publications: Johns, McQuitty and Falkner (1989); McQuitty and Falkner (1993); McQuitty *et al.* (2000)

59. Khirbat al-Karak

Publications: Delougaz and Haines (1960)

60. Khirbat Khamase (sp.)

Publications: Amit (1991)

61. Khirbat al-Lawza

Publications: Ellenblum *et al.* (1996)

62. Khirbat al-Mafjar

Publications: Baramki (1940–42); Whitcomb (1988)

63. Khirbat Manawat (sp.)

Publications: Stern (1998)

64. Khirbat Marus (sp.)

Publications: Ilan and Druks (1984); Ilan and Damati (1985)

65. Khirbat al-Minyā

Publications: Grabar *et al.* (1960)

66. Khirbat al-Mu‘allaq

Publications: Lindner *et al.* (1996)

67. Khirbat Nabī Būlus

Publications: Rapuono *et al.* (1998)

68. Khirbat al-Nakhl

Publications: Milwright (2000)

69. Khirbat Raʿash (sp.)
Publications: Ayalon *et al.* (1996)
70. Khirbat Shamaʿ (sp.)
Publications: Meyers *et al.* (1976)
71. Khirbat al-Shubayka
Publications: Tatcher and Syon (1996)
72. Khirbat Summaqa (sp.)
Publications: Dar (1984, 1987–88)
73. Khirbat Zikhrin (sp.)
Publications: Anon. (1983)
74. Lajjun
Alternatives: Lejjun (An.)
Publications: Brown (forthcoming)
75. Mādabā
Publications: Herr (1991); Piccorillo (1994); Acconci and Gabrieli (1994)
76. Mafrāq
Publications: Sārī (1995)
77. Mayrūn
Alternatives: Meron (H.)
Publications: Meyers *et al.* (1981)
78. Mazraʿā
Publications: King *et al.* (1987); King (1989)
79. Mīnāʿ³
Alternatives: Port St Simeon (Cr.)
Publications: Hobson (1937); Lane (1938)
80. Mudaybiʿ^c
Publications: Milwright (2000)

81. Mughārat al-Warda
Publications: Coughenour (1976)
82. Nahal Minim (H.)
Publications: Rosen and Goodfriend (1993)
83. Nāṣira
Alternatives: Nazareth
Publications: Bagatti (1971, 1984); Loffreda (1983); Pringle (1984)
84. Nuris (sp.)
Publications: Syon (1995)
85. Qalʿat al-Jaʿbar
Publications: Tonghini (1998)
86. Qalʿat al-Rabaḍ (ʿAjlūn)
Publications: Johns (1932); Brown (1991)
87. Qaṣr al-Bint (Petra)
Publications: Zayadine (1982)
88. Qaṣr al-Ḥayr East
Publications: Grabar *et al.* (1978)
89. Qaṣrayn
Publications: Maʿoz and Killibrew (1985)
90. Qubayba
Publications: Bagatti (1947)
91. Quwalba
Alternatives: Abila (An.)
Publications: Milwright (2000)
92. Raḥba-Mayādin
Publications: Bianquis (1989)
93. Ramla
Publications: Kaplan (1959)

94. Raqqa/Rāfiqa

Publications: Sarre and Herzfeld (1911–20); Sauvaget (1948); Abdul-Hakk (1951); Milwright (2005)

95. Rās al-Dabub (sp.)

Publications: Barkay (1986)

96. Rās al-Qabub (sp.)

Publications: Banning *et al.* (1989)

97. Rujm al-Hanu (sp.)

Publications: McGovern (1983)

98. Ruṣāfa

Alternatives: Sergiopolis (An.); Rusāfa (Ar.)

Publications: Legner (1964); Logar (1991, 1992, 1995)

99. Sabastīyya

Alternatives: Samaria (An.)

Publications: Crowfoot (1932); Crowfoot *et al.* (1957)

100. Ṣātāf

Alternatives: Ṣātāf

Publications: Gibson *et al.* (1991)

101. Shawbak

Alternatives: Montréal (Cr.)

Publications: Brown (1988)

102. Ṭabaqat Faḥl

Alternatives: Pella (An.), Fiḥl (Ar.)

Publications: Smith (1973); Smith and Day (1989); McNicoll *et al.* (1992); Walmsley (2000)

103. Ṭabariyya

Alternatives: Tiberias (H.)

Publications: Hirschfeld (1997)

104. Tabgha

Alternatives: Capernaum (An.)

Publications: Loffreda (1970, 1982)

105. Tal Abū Qa'dān

Publications: Franken and Kalsbeek (1975); Sauer (1976)

106. Tal Abū Ṣarbūt

Publications: LaGro and de Haas (1988, 1989–90); de Haas *et al.* (1989, 1992)

107. Tal al-ʿAjjūl (Ghazza/Gaza)

Publications: Petric (1933)

108. Tal ʿAfiq

Alternatives: Aphek (An.)

Publications: Kochavi (1977)

109. Tal Arbaʿīn

Publications: Karīm (1993)

110. Tal ʿArqa

Publications: Will *et al.* (1973); Thalmann (1978); Hakimian and Salamé-Sarkis (1988)

111. Tal Barrī

Alternatives: Kahat (sp.)

Publications: Scerrato and Ventrone (1982); Pecorella (1983)

112. Tal Duthāʾ

Alternatives: Dothan (H.)

Publications: Saller (1957)

113. Tal Fandī

Publications: Ibrahim *et al.* (1976); Karīm (1988, 1989)

114. Tal al-Fūl

Alternatives: Gibeah (An.)

Publications: Albright (1923–24)

115. Tal al-Ḥasī

Publications: Toombs (1985); Eakins (1993)

116. Tal Ḥrīm

Publications: Berthier and Geyer (1988)

117. Tal Jazar

Publications: MacAlister (1912)

118. Tal Jimna

Publications: Schaefer (1989)

119. Tal Malabiyya (sp.)

Publications: Lebeau *et al.* (1985)

120. Tal Minis (Maʿarrat al-Nuʿmān)

Publications: Porter and Watson (1987); Mason (1995)

121. Tal Miqna

Alternatives: Ekron (An.)

Publications: Gittlen (1993)

122. Tal al-Mutasallim

Publications: Schumacher (1908)

123. Tal Nimrīn

Publications: Dornemann (1990); Flanagan *et al.* (1992, 1994)

124. Tal Qaymūn

Alternatives: Yoqneʿam (H.)

Publications: Ben-Tor and Rosenthal (1978); Ben-Tor *et al.* (1979)

125. Tal al-Šāfiyya (and Tal Zakariyya)

Publications: Bliss and MacAlister (1902)

126. Tal Sahl al-Šarābat

Publications: Suleiman and Betts (1981)

127. Tal Saylūn

Alternatives: Shiloh (An.)

Publications: Andersen (1985)

128. Tal al-Sulṭān (Jericho)

Publications: Sellin and Watzinger (1913)

129. Tal Yehud (H.)

Publications: Shemueli (1996)

130. Ṭanṭūra

Alternatives: Dor (H.)

Publications: Stern (1994); Gibson *et al.* (1999)

131. Tarqa (sp.)

Alternatives: Ashara (An.)

Publications: Mahmoud (1978)

132. Tīʿinnik

Publications: Ziadeh (1995)

133. Tripoli

Alternatives: Tarabulus (Ar.)

Publications: Salamé-Sarkis (1980)

134. Udhrūḥ

Alternatives: Udruh (An.)

Publications: Killick (1983, 1987)

135. Umm al-Jimāl

Publications: De Vries (1998)

136. Umm Qays

Alternatives: Gadara (An.)

Publications: Andersen and Strange (1987)

137. Wuʿayra (Wādī Mūsa)

Alternatives: Vaux Moïse (Cr.)

Publications: Brown (1987); Vannini and Vanni Desideri (1995);
Vannini and Tonghini (1997)

138. Zirʿīn

Alternatives: Tell Jezreel (H.)

Publications: Grey (1994)

Regional Surveys (figure 9)

a. ʿAthlīth

Ronen and Olami (1978)

b. Edom (An.)

Publications: Hart and Falkner (1985)

c. Gazit (H.)

Publications: Gal (1991)

d. Har Ḥamran (H.)

Publications: Haiman (1993)

e. Ḥasbān/Mādabā Plains

Publications: Ibach (1987); Herr (1991)

f. Ḥayfā

Publications: Ronen and Olamy (1983)

g. Herodium (H.)

Publications: Hirschfeld (1985)

h. Jabal al-Shaykh

Alternatives: Mount Hermon (H.)

Publications: Dar (1993)

i. Karak plateau

Publications: Worschech (1984, 1985); Brown (1991, 1992)

j. King Ṭalāl Reservoir

Publications: Kerestes *et al.* (1977–78)

k. Lakhish (H.)

Publications: Dagan (1992)

l. Ludd

Alternatives: Lod (H.)

Publications: Gophna and Beit-Arieh (1997)

m. Ma‘anit (H.)

Publications: Ne‘eman (1990)

n. Naḥal Yattir (H.)

Publications: Govrin (1991)

o. Nahalal (H.)

Publications: Raban (1982)

p. Rās al-‘Ayn

Publications: Kochavi and Beit-Arieh (1994)

q. Southern Ḥawrān

Publications: Kennedy and Freeman (1995)

r. Southern Ghawr

Publications: King *et al.* (1987); King (1989); Whitcomb (1992); MacDonald (1996)

s. Tal Rif ‘at

Publications: Bernus-Taylor (1981)

t. Wādī ‘Arab

Publications: Hanbury-Tenison (1984)

u. Wādī al-Ḥasā

Publications: MacDonald (1988); MacDonald (1996)

v. Wādī ‘Isal

Publications: Jacobs (1983)

w. Wādī al-Yābis

Publications: Mabry and Palumbo (1988)

x. Wādī Ziqlāb

Publications: Banning *et al.* (1987)

y. Zīb

Alternatives: Akhziv (H.)

Publications: Frankel and Getzov (1997)

z. East Jordan Valley

Publications: Ibrahim *et al.* (1976)

Archaeological sites and survey regions not represented on maps

‘Amwās (Israel)

Alternatives: Emmaus (An.)

Publications: Gichon and Linden (1984)

‘Āna (Iraq)

Publications: Northedge (1988)

Aphrodisias (Turkey)

François (2001)

‘Aydhāb (Sudan)

Publications: Hobson (1926–27); Paul (1955)

Belmont castle (Israel)

Publications: Harper and Pringle (2001)

Cairo (Egypt)

Alternatives: al-Qāhira (Ar.)

Publications: Gayraud (1986)

Cyprus (excavations of cemeteries)

Publications: Du Plat Taylor (1938); Du Plat Taylor and Megaw (1951)

Dakhla Oasis (Egypt)

Publications: Keall (1981)

Dāliya region (Israel)

Publications: Olami (1981)

Dayr Mar Saba (Israel)

Publications: Patrich (1994)

Famagusta (Cyprus)

Publications: Mogabgab (1951)

Fustāt (Egypt)

Publications: Wallis (1891); Fouquet (1900), Bahgat (1914); Baroni (1914); Arab Museum (1922); Bahgat and Massoul (1930); Mostafa (1949); Kubiak (1970, 1998); Scanlon (1971, 1980, 1984); Gyllensvard (1973, 1975); Kubiak and Scanlon (1979); ‘Abd al-Rāziq (1988); Mason and Keall (1990); Mason (2004)

Ḥārim (Syria)

Publications: Gelichi (2006)

Harrān (Turkey)

Publications: Rice (1952)

Jarash region (Jordan)

Publications: Hanbury-Tenison (1987); Leonard (1987)

Julfār (United Arab Emirates)

Publications: Hansman (1985).

Kawm al-Dikka (Alexandria, Egypt)

Alternatives: Kom al-Dikka

Publications: Lane (1949); Marzouk (1957, 1959); Lipinska and Riad (1966); Kubiak (1969); François (1998)

Khīrbat al-‘Ayadiyya (Israel)

Alternatives: Ḥorvat ‘Usa (H.)

Publications: Ben-Tor (1966)

Khīrbat Birzayt (Palestine Authority)

Publications: Abd Rabu (2000)

Khīrbat al-Nawāfla (Wādī Mūsa, Jordan)

Publications: ‘Amr *et al.* (2000)

Konya (Turkey)

Publications: Rogers (1972)

Kouklia/Palaeopaphos (Cyprus)

Maier and Wartburg (1983)

Lebanon (excavations of cave dwellings)

Publications: Abdul-Nour and Salamé-Sarkis (1991); Abi-‘Aoun *et al.* (1994)

Muqablayn (Jordan)

Publications: ‘Amr (1973)

Nicosia (Cyprus)

Publications: Megaw (1951a, 1951b)

Nippur (Iraq)

Gibson, Armstrong and McMahon (1998)

Quṣayr Qadīm (Egypt)

Publications: Whitcomb and Johnson (1979, 1982)

Samsat (Turkey)

Alternatives: Samosata

Publications: Öney (1994); Redford (1995)

Ṭafīla region (Jordan)

Publications: MacDonald *et al.* (2001)

Ṭūd (Egypt)

Alternatives: Ṭūd (Ar.)

Publications: Joel (1992)

Ṭūr (Egypt)

Kawatoko (2001).

Wāsiṭ (Iraq)

Publications: Safar (1945)

BIBLIOGRAPHY

Abbreviations

- AAAS: *Les Annales Archéologiques Arabes Syriennes*
AASOR: *Annual of the American Schools of Oriental Research*
ACORN: *American Center of Oriental Research Newsletter*
ADAJ: *Annual of the Department of Antiquities of Jordan*
AEMA: *Archivum Eurasiae Medii Aevi*
AI: *Ars Islamica*
AM: *Archéologie Médiévale*
An.Is.: *Annales Islamologiques*
AV: *Archivio Veneto*
BASOR: *Bulletin of the American Schools of Oriental Research*
BEO: *Bulletin d'Études Orientales*
BF: *Byzantinische Forschungen. Internationale Zeitschrift für Byzantinist*
BGA: *Bibliotheca Geographorum Arabicorum*
BIE: *Bulletin de l'Institut Égyptien*
BMFEA: *Bulletin of the Museum of Far Eastern Antiquities*
BMQ: *British Museum Quarterly*
BSOAS: *Bulletin of the School of Oriental and African Studies*
BLVS: *Bibliothek des Literarische vereins Stuttgart*
CAAA: *Colloquies on Art and Archaeology in Asia. Percival David Foundation, London*
DI: *Der Islam*
DM: *Damaszener Mitteilungen*
DOP: *Dumbarton Oaks Papers*
EI2: *Encyclopaedia of Islam. New Edition. Leiden: E.J. Brill 1960–*
FUBFA: *Farouk I University Bulletin of the Faculty of Arts*
IA: *Islamic Art*
IEJ: *Israel Exploration Journal*
IJMES: *International Journal of Middle East Studies*
JARCE: *Journal of the American Research Center in Egypt*
JEEH: *Journal of European Economic History*
JNES: *Journal of Near Eastern Studies*
JPA: *Journal of Palestinian Archaeology*
JPOS: *Journal of the Palestine Oriental Society*
JRAS: *Journal of the Royal Asiatic Society*
LA: *Studium Biblicum Franciscanum. Liber annuus*
MARB: *Mémoires de l'Académie Royale de Belgique*
MC: *Medieval Ceramics*
MSR: *Mamluk Studies Review*
NDPT: *Newsletter of the Department of Pottery Technology (Leiden University)*
NIAAYU: *Newsletter of the Institute of Archaeology and Anthropology, Yarmouk University*
OSIA: *Oxford Studies in Islamic Art*
PEQ: *Palestine Exploration Quarterly*
PO: *Patriologia Orientalis*
PPTS: *Palestine Pilgrim Texts Society*
RC EA: *Répertoire Chronologique d'Épigraphie Arabe, eds., Etienne Combé, Jean Sauvaget and Gaston Wiet (Cairo, 1931–)*

- RDAC: *Report of the Department of Antiquities of Cyprus*
- RHC (Doc.): *Recueil des historiens des Croisades. Documents Arméniens*. Documents Latin et Français relatifs à l'Arménie, 2 vols. (Paris: Académie des Inscriptions et Belles-lettres, 1869–1906, repr. Farnborough, 1967)
- RHC (Occ.): *Recueil des historiens des Croisades. Historiens occidentaux*, 5 vols. (Paris: Académie des inscriptions et belles-lettres, 1841–95, repr. Farnborough, 1967)
- RHC (Or.): *Recueil des historiens des Croisades. Historiens orientaux*, 4 vols. (Paris: Académie des Inscriptions et Belles-lettres, 1872–98, repr. Farnborough, 1969)
- ROL: *Revue de l'Orient Latin*
- RVM: *Recueil de Voyages et de Mémoires, publié par la Société de Géographie* (Paris)
- SBF: *Studium Biblicum Franciscanum*
- SHAJ: *Studies in the History and Archaeology of Jordan*
- TOCS: *Transactions of the Oriental Ceramic Society*
- ZDPV: *Zeitschrift des Deutschen Palästina-Vereins*
- ‘Abd al-Haqq, ‘Abd al-Mu‘min (1852–54), *Lexicon geographicum (Marāsīd al-ittīlā’ ‘alā asmā’ al-amkīna wa’l-biqā’)*, ed. Theodore Juynboll, 3 vols. Leiden: Brill.
- ‘Abd al-Rāziq, A. (1988), ‘Le sgraffito de l’Égypte dans la collection d’al-Ṣabāḥ’, *An. Isl.* 24: 1–23, pls. I–VIII.
- Abd Rabu, O. (2000), ‘Khirbet Birzeit research and excavation project 1999: the pottery’, *JPA* 1.1: 7–18.
- Abdulhakk, Selim (1951), ‘Le cavalier en céramique glacisée de Raqqa’, *AAAS* 1: 143–44.
- Abdul-Nour, Hani and Hassan Salamé-Sarkis (1991), ‘Troglodytisme médiéval au Liban: premières données’, *Berytus* 39: 177–87.
- Abel, Armand (1930), *Gabī et les grand faïenciens Égyptiens d’époque Mamlouke*. Cairo: Institut Français d’Archéologie Orientale.
- Abel, F.-M. (1967), *Géographie de la Palestine*, third edition. Paris: J. Gabalda.
- Abi-‘Aoun, Boutros, Fadi Baroudi, Antoine Ghaouche, Alain Maroun and Karam Rizk (1994), eds., *Momies du Liban: Rapport préliminaire sur la découverte archéologique de ‘Asī-l-Hadat (XIII^e siècle)*. Paris: Groupe d’étude et de recherches souterraines du Liban.
- Abu Dayyah, Abdul Samī‘, Joseph Greene, Ibrahim Haj Hassan and Emsaytif Sulci-man (1991), ‘Archaeological survey of Greater Amman, phase 1: final report’, *ADAJ* 35: 361–96.
- Abū al-Fidā’, ‘Imad al-Dīn Ismā‘īl b. ‘Alī (1840), *Taqwīm al-buldān (Géographie d’Aboul Fēda)*, ed. Joseph Reinaud and William MacGuckin de Slane. Paris: Dar al-Tibaah al-Sultaniyah.
- (1969), *Resumé de l’histoire des Croisades tirée des annales d’Abou’l-Fedā* (excerpts from *al-Mukhtaṣar fī akhbār al-bashār*) in RHC (Or.) 1: 1–165.
- (1983), *The Memoirs of a Syrian Prince: Abū l-Fidā’, Sultan of Hamāh, 672–732/1273–1331* (excerpt from *al-Mukhtaṣar fī akhbār al-bashār*), *Freiburger Islamstudien* 9, trans. Peter Holt. Wiesbaden: Steiner.
- Abu Husayn, Abdul-Rahim (1985), *Provincial Leaderships in Syria, 1575–1650*. Beirut: American University of Beirut Press.
- Abu Jaber, N. and Z. al-Saa’d (2000), ‘Petrolology of Middle Islamic pottery from Khirbat Faris, Jordan’, *Levant* 32: 179–88.
- Abujaber, Raouf (1989), *Pioneers over Jordan: The Frontier of Settlement in Transjordan, 1850–1914*. London: Tauris.
- (1997), ‘Agriculture in the al-Balqā’ district during the nineteenth century’, *SHAJ* 6: 385–91.
- Abu Raya, Rafa (1997), ‘Jerusalem—Bet Elihayu’, *ESI* 16: 102–103.
- Acconci, A. and E. Gabrieli (1994), ‘Scavo del cortile bajali a Madaba’, *LA* 44: 405–520, pls. 13–18.

- Addis, John (1968), 'Some Ch'ing Pai and white wares found in the Philippines' (Addis, 1968a), 'Shu fu type wares excavated in the Philippines' (Addis, 1968b) and 'Early blue and white excavated in the Philippines' (Addis, 1968c) in: *Manila Trade Pottery Seminar. Introductory Notes*. Manila: Research Foundation in Philippine Anthropology and Archaeology.
- (1969), 'Chinese porcelain found in the Philippines', *TOCS* 37, 1967–68: 17–36.
- Adler, Elkan (1930), ed. and trans., *Jewish Travellers in the Middle Ages: 19 Firsthand Accounts*. London: George Routledge and Sons.
- Albert of Aix (Albertus Aquensis) (1967), *Liber Christianae expeditionis pro ereptione emundatione Sanctae Hierosolymitanae ecclesiae* in RHC (Occ.) 5.
- Albright, William (1923–24), *Excavations and Results at Tell el-Ful (Gibeah of Saul) by the Director of the School in Jerusalem, W.F. Albright, AASOR* 4: 1–89.
- (1924), 'The archaeological results of an expedition to Moab and the Dead Sea', *BASOR* 14: 2–12.
- Alhazmeh, Khaled (1993), *Late Mamlūk Patronage: Qānṣūh al-Ghūrī's Waqf and his Foundations in Cairo*. Unpublished Ph.D. thesis, Ohio State University.
- Allan, James (1973), 'Abū'l-Qāsim's treatise on ceramics', *Iran* 11: 111–20.
- (1982), *Islamic Metalwork: The Nihad es-Said Collection*. London: Sotheby's.
- Allan, James, L. Llewellyn and F. Schweizer (1973), 'The history of so-called Egyptian faience in Islamic Persia: investigations into Abū'l-Qāsim's treatise', *Archaeometry* 15.2: 165–73.
- Amar, Z. (1998), 'The production of salt and sulphur from the Dead Sea region in the tenth century according to at-Tamimi', *PEQ* (January–June): 3–7.
- Ambrose (1941), *The Crusade of Richard Lion-Heart*, trans. Merton Jerome Hubert with notes by John LaMonte. New York: Columbia University Press.
- Amit, D. (1991), 'Khirbet Khamase', *ESI* 10: 148–49.
- Amitai-Preiss, Reuven (1994), 'A fourteenth-century Mamluk inscription from rural Palestine', *IEJ* 44: 234–42.
- (1995), *Mongols and Mamluks: The Mamluk Īlkhānid war, 1260–1281*, Cambridge studies in Islamic civilisation. Cambridge: Cambridge University Press.
- (1995–97), 'Hülegü and the Ayyūbid lord of Transjordan (more on the Mongol governor of al-Karak)', *AEMA* 9: 5–16.
- 'Amr, Abdel-Jalil (1973), 'Excavations at Meqablein', *ADAJ* 18: 73–74.
- (1984), 'Some Ayyubid pottery lamps from Rujm al-Kursi and other related Mamluke examples', *Berytus* 32: 210–10.
- (1989), 'A New Ayyubid inscription from al-Karak, Jordan', *JDPAV* 105: 166–72.
- 'Amr, K., A. al-Momani, N. al-Nawafleh and S. al-Nawafleh (2000), 'Summary results of the archaeological project at Khirbat an-Nawāfla/Wādī Mūsā', *ADAJ* 44: 231–55.
- Andersen, Flemming (1985), *Shiloh. The Danish Excavations at Tall Saülün, Palestine in 1926, 1929, 1932 and 1963. II: The Remains from the Hellenistic and Mamlūk Periods*, Publications of the National Museum of Denmark, Archaeological Series, Vol. 23. Copenhagen: Carlsberg Institute.
- Andersen, Von Flemming G. and James Strange (1987), 'Bericht über drei Sondagen in Umm Qes, Jordanien, im Herbst 1983', *JDPAV* 103: 78–100, pls. 8–11.
- Anon. (1983), 'Khirbet Zikhrin', *ESI* 2: 114–15.
- (1985), *Relics salvaged from the Seabed of Sinan. Materials I. Compiled by the Bureau of Cultural Properties, Ministry of Culture and Information*. Seoul: Dong Hwa.
- (1995), *Urban Archaeology '94. Excavations of the Souk Area, Beirut*. Beirut: Directorate General of Antiquities of Lebanon.
- Anonymous Pilgrims (1894), *Anonymous Pilgrims I–VI*, trans. A. Stewart. PPTS 6.
- Arab Museum (Musée de l'Art Arabe du Caire) (1922), *La céramique Égyptienne de l'époque Musulmane, publié sous les auspices du Comité de conservation des monuments de l'art Arabe*. Bale: Frobenius.

- Ashtor, Eliahu (1981), 'Levantine sugar industry in the later Middle Ages: a case of technological decline', in ed. A. Udovitch, *The Islamic Middle East, 700–1900: Studies in Economic and Social History*, Princeton studies in the Near East: Princeton NJ: Princeton University Press.
- Ashtor, Eliahu and G. Cevidalli (1983), 'Levantine alkali ashes and European industries', *JEEH* 12: 7–36.
- Atil, Esin (1981), *Renaissance of Islam: Art of the Mamluks*. Washington DC: Smithsonian Institution Press.
- Avigad, Nahman (1971), *Beth She'arim. Report of the Excavations during 1953–1958. III: Catacombs 12–23*. Jerusalem: Israel Exploration Society.
- (1978), 'Jerusalem and the Jewish quarter of the old city', *IEJ* 28: 200–201.
- (1983), *Discovering Jerusalem*. Nashville Tn: T. Nelson.
- Avissar, Miriam (1992), 'Medieval pottery from areas A1 and G', in eds. Alon de Groot and Donald Ariel, *Excavations in the City of David, 1978–1985. Directed by Yigal Shiloh. Volume III: Stratigraphic, Environmental and other Reports*, Qedem 33. Jerusalem: Hebrew University.
- 'Awra, Ibrāhīm (1936), *Tārīkh wilāyat Sulaymān Bāsā al-Ādil*. Sidon, 1355H.
- Ayalon, David (1977), 'Studies in the structure of the Mamluk army, I–III', in David Ayalon, *Studies on the Mamlūks of Egypt (1250–1517)*. London: Variorum Reprints. Reprinted from *BSOAS* 15.2 (1953): 203–28; 15.3 (1953): 448–76; 16.1 (1954): 57–90.
- (1988), 'The auxiliary forces of the Mamluk sultanate', *DI* 65: 13–37.
- (1996), 'Kerak in the Mamluk period', *Qadmoniot* 29.1 (111): 44–52 (in Hebrew).
- Ayalon, Etan, William Neidinger and Eulah Matthews (1996), 'Ḥorvat Ra'ash', *ESI* 15: 43–47.
- 'Aynī, Badr al-Dīn Maḥmūd ibn Muḥammad (1969), *Le collier des perles ('Iqd al-jumān fi ta'rikh ahl al-zamān)* in *RHC* (Or.) 2, pt. 2.
- 'Ayn-i 'Alī (1979), *Kawānīn-i āl-i 'osmānī der hulāsa-i mezāmīn-i defter-i dūwān*, photographic repr. of 1280/1863 ed. with new introduction by M. Gökbilgin. Istanbul: Enderun Kitabevi.
- Bacharach, Jere (1973), 'The dinar versus the ducat', *IJMES* 4: 77–96.
- Bagatti, Bellarmino (1947), *I monumenti di Emmaus el-Qubeibeh e dei dintorni*, SBF. Jerusalem: Franciscan Press.
- (1948), *Il santuario della visitazione ad 'Ain Karim (montana Judaeae): esplorazione archeologica e ripristino*, SBF 5. Jerusalem: Franciscan Press.
- (1971), 'Scavo presso la chiesa di S. Giuseppe a Nazaret (Agosto 1970)', *LA* 21: 5–32.
- (1984), *Gli Scavi di Nazaret II: Dal secolo XII ad oggi*. SBF 17. Jerusalem: Franciscan Press.
- Bahā' al-Dīn Yūsuf b. Rāfi' (Ibn Shaddād) (1969), *Anecdotes et beaux traits de la vie du sultan Youssef (Salāh ed-Dīn) (Kūtāb al-nawādir al-sultāniyya wa'l-maḥāsīn al-yūsufiyya)* in *RHC* (Or.) 3: 1–374.
- Bahgat, Aly (1914), 'Les fouilles de Fostat: découverte d'un four de potier Arabe datant à XIV^e siècle', *Bulletin de l'Institut Égyptien* ser. 5, 8: 233–45, pls. VIII–XII.
- Bahgat, Aly and Félix Massoul (1930), *La céramique Musulmane de l'Égypte*. Cairo: Institut Français d'Archéologie Orientale.
- Baiquan, C. (1993), 'The development of Song dynasty qingbai wares from Jingdezhen', in ed. Rosemary Scott, *The Porcelains of Jingdezhen*, *CAAA* 16: 13–32.
- Bakhit, M. Adnan (1982), *The Ottoman Province of Damascus in the Sixteenth Century*. Beirut: Librairie du Liban.
- (1992), *Das Kömigreich von al-Karak in der Mamlūkischen Zeit*, trans. and ed. Alexander Scheidt. Frankfurt: Peter Lang.
- (1995), 'Al-Salt', *EI2* 8: 999–1000.

- (1997), ‘Shawbak’, *EI2* 9: 373–74.
- Bakhit, M. Adnan and Nufan R. Hmoud (1989), ed. and trans., *The Detailed Defter of Liwā’ Ajlūn (The District of Ajlūn). Tapu Defteri No: 185, Ankara. A Study, Edition and Translation of the Text*. Amman: The University Of Jordan Press (Arabic and Ottoman).
- (1991) ed. and trans, *The Detailed Defter of Liwā’ Ajlūn (The District of Ajlūn). Tapu Defteri No: 970, Istanbul. A Study, Edition and Translation of the Text*. Amman: The University Of Jordan Press (Arabic and Ottoman).
- Balfet, Hélène (1965), ‘Ethnographic observations in North Africa and archaeological interpretation: the pottery of the Maghreb’, in ed. Frederick Matson, *Ceramics and Man*, Viking Publications in Anthropology 41. London: Wenner-Gren Foundation for Anthropological Research: 161–77.
- Banning, E., R. Dods, J. McCorriston, S. Monckton and P. Sheppard (1987), ‘Report on the Wadi Ziqlab project’, *ADAJ* 31: 321–42.
- Baram, Uzi and Lynda Carroll (2000), eds., *A Historical Archaeology of the Ottoman Empire: Breaking new Ground*. New York and London: Kluwer Academic/Plenum.
- Baramki, Dmitri (1940–42), ‘The pottery from Khirbet el Mejjer’, *QDAP* 10: 65–103.
- Barbir, Karl (1980), *Ottoman Rule in Damascus, 1708–1785*. Princeton: Princeton University Press.
- Barkay, Gabriel (1986), *Ketef Himmon: A Treasure facing Jerusalem’s Walls*, The Israel Museum Catalogue 274. Jerusalem: Israel Museum.
- Baroni, Lauro (1914), ‘I forni di ceramica scoperti durante gli scavi nell’antica città di Fostat a Cairo vecchio’, *Faenza*: 97–100.
- Battista, Antonio and Bellarmino Bagatti (1976), *La fortezza Saracena del Monte Tabor (A.H. 609–15: A.D. 1212–18)*, SBF. Collectio Minor 18. Jerusalem: Franciscan Press.
- Bauden, Frédéric (2004), ‘The recovery of Mamluk chancery documents in an unsuspected place’, in eds. Michael Winter and Amelia Levanoni, *The Mamluks in Egyptian and Syrian Politics and Society*. Leiden and Boston: Brill: 59–76.
- Baybars al-Manṣūrī al-Dawādār (1998), *Ḥubdat al-fikra fī ta’rīkh al-hijra. History of the Early Mamluk Period*, ed. Donald Richards. Bibliotheca Islamica 42. Beirut: Das Arabische Buch.
- Beamish, J. (1995), ‘The significance of Yuan blue and white exported to South East Asia’, in eds. Rosemary Scott and John Guy, *South East Asia and China: Art, Interaction and Commerce*, *CAA* 17: 225–51.
- Bell, Gertrude (1907), *The Desert and the Sown*. London: William Heinemann.
- Bennett, M. Ann (1972), *Byzantine and Islamic Ceramics from Hebron (el-Khalil): The Common Wares*. Unpublished Ph.D. thesis, University of Utah.
- Bennett, Crystal (1979), ‘Excavations at the citadel (*al-qal’a*), Amman, 1978’, *ADAJ* 23: 161–79.
- Ben-Tor, Amnon (1966), ‘Excavations at Ḥorvat ‘Usa’, *Atiqot*, Hebrew ser. 3: 1–24, 1*-2*, pls. I–IV.
- Ben-Tor, Amnon and Renate Rosenthal (1978), ‘The first season of excavations at Tel Yoqne’am, 1977. Preliminary report’, *IEJ* 28: 57–82, pls. 16–18.
- Ben-Tor, Amnon, Yuval Portugali and Miriam Avissar (1979), ‘The second season of excavations at Tel Yoqne’am, 1978. Preliminary report’, *IEJ* 29: 65–83, pls. 9–11.
- Bernus-Taylor, Marthe (1981), ‘Islamic glazed pottery’, in ed. John Matthers, *The River Qoueiq, Northern Syria, and its Catchment. Studies arising from the Tell Rifa’at Survey, 1977–79. Part ii*. BAR International Series 98 (ii). Oxford: British Archaeological Reports: 473–98.
- Berthier, Sophie (1985), ‘Sondages dans le secteur des thermes sud à Buṣrā (Syrie), 1985’, *Berytus* 33: 5–45.
- Berthier, Sophie and Bernard Geyer (1988), ‘Rapport préliminaire sur une campagne de fouilles de sauvetage a Tell Ḥrīm (Syrie) (hiver, 1986)’, *Syria* 65: 63–98.

- Bianquis, Thierry (1986–89), *Damas et la Syrie sous la domination fatimide (359–468/969–1076)*. *Essai d'interprétation de chroniques arabes médiévales*, 2 vols. Damascus: IFEAD.
- (1989), 'Mission franco-syrienne de Rahba-Mayadin (1976–1981)', in *Contribution française l'archéologie syrienne, 1969–1989*. Damascus: Institut Français d'Archéologie du Proche Orient: 220–26.
- Bini, M. and S. Bertocci (1997), 'The survey of al-Wu'ayra: a contribution to the knowledge of Crusader castles of Jordan', *ADAJ* 41: 403–14.
- Bliss, Frederick and Robert MacAlister (1902), *Excavations in Palestine during the Years 1898–1900*. London: Palestine Exploration Fund.
- Boas, Adrien (1992), 'Islamic and Crusader pottery (ca. 640–1265) from the Crusader city (area TP/4)', in ed. Robert Vann, *Caesarea Papers. Straton's Tower, Herod's Harbour, and Roman and Byzantine Caesarea*, *Journal of Roman Archaeology Supplementary Series 5*. Ann Arbor MI: *Journal of Roman Archaeology*: 154–66.
- Bresenham, Mary (1985), 'Descriptive and experimental study of contemporary and ancient pottery techniques at Buṣrā', *Berytus* 33: 89–101.
- Brooker, Colin and Ernst-Axel Knauf (1988), 'Review of Joshua Prawer: Crusader Institutions', *ZDPV* 104: 104–108.
- Brosh, Na'ama (1986), 'Ceramic remains: A. pottery of the eighth to thirteenth centuries', in eds. Lee Levine and Ehud Netzer, *Excavations at Caesarea Maritima 1975, 1976, 1979—Final Report*, *Qedem* 21. Jerusalem: Hebrew University: 66–89.
- Broshi, Magen and Yoram Tsafrir (1977), 'Excavations at the Zion Gate, Jerusalem', *IEJ* 27: 28–37.
- Brown, Robin (1979), 'Excavations at 'Iraq el Emir', *ADAJ* 23: 17–30.
- (1983), 'The 1976 ASOR soundings', in ed. Nancy Lapp, *The Excavations at Araq el-Emir, vol. 1*, *AASOR* 47: 105–32.
- (1987), 'A 12th century A.D. Sequence from southern Transjordan: Crusader and Ayyubid occupation at el-Wu'ayra', *ADAJ* 31: 267–88.
- (1988), 'Late Islamic Shobak: A summary report of the 1986 excavations', *ADAJ* 32: 225–45.
- (1989), 'Excavations in the fourteenth-century Mamluk palace at Kerak', *ADAJ* 33: 287–304.
- (1991), 'Ceramics from the Kerak plateau', in Miller (1991): 232–46.
- (1992), *Late Islamic Ceramic Production and Distribution in the Southern Levant: A Socio-economic and Political Interpretation*. Unpublished Ph.D. Thesis, Binghamton University NY.
- (2000), 'The distribution of thirteenth- to fifteenth-century glazed wares in Transjordan: A case study from the Kerak plateau', in eds. Lawrence Stager, Joseph Greene and Martin Coogan, *The Archaeology of Jordan and Beyond: Essays in Honor of James A. Sauer*. Winona Lake IN: Eisenbrauns: 84–99.
- (forthcoming), 'Late Islamic ceramic sequences from el-Lejjun: stratigraphic and historical contexts', in ed. S. Thomas Parker, *The Roman Frontier in Central Jordan: Final Report on the Limes Arabicus Project, 1980–1989*. Washington D.C.: Dumbarton Oaks: 375–99.
- (unpublished), 'Report of the 1987 excavation at Kerak castle: The Mamluk palace reception hall'. Unpublished report submitted to the Department of Antiquities of Jordan, 1988.
- Burchard of Mount Sion (1896), *Travels in Palestine*, trans. A. Stewart. PPTS 12.
- Burckhardt, John Lewis (1822), *Travels in Syria and the Holy Land*, 3 vols. London: John Murray.
- Cahen, Claude and Ibrahim Chabbouh (1977), 'Le testament d'al-Malik aṣ-Ṣāliḥ Ayyūb', *BEO* 29: 97–114.
- Carswell, John (1966), 'An early Ming porcelain stand from Damascus', *OA* 12.3 (Autumn): 176–82.
- (1972), 'China and the Near East: The recent discovery of Chinese porcelain in

- Syria', in ed. William Watson, *The Westward Influence of the Chinese Arts from the 14th to the 18th Century*. CAAA 3: 20–25.
- (1979), 'Šm in Syria', *Iran* 17: 15–24.
- (2000), *Blue and White: Chinese Porcelain around the World*. London: British Museum Press.
- Champion, Timothy (1990), 'Medieval archaeology and the tyranny of the historical record', in eds. David Austin and Leslie Alcock, *From the Baltic to the Black Sea: Studies in Medieval Archaeology*. London and Boston: Unwin Hyman: 79–95.
- Chartes (1880), *Chartes de Terre-Sainte provenant de l'abbaye de Notre-Dame de Josephat*, Bibliothèque des Écoles Françaises d'Athènes et de Rome, fasc. 19, ed. Henri-François Delaborde. Paris: E. Thorin.
- Chartes (1899), 'Chartes de l'abbaye de Notre-Dame de la vallée de Josephat (1108–1291)', ed. Charles Kohler, *ROL* 7: 108–222.
- Chartes (1907), 'Chartes de Terre Sainte', ed. Joseph Delaville le Roulx, *ROL* 11: 181–91.
- Chen Hsin-hsiung (1985), *Shards of Sung and Yuan Period found in the Pescadores Islands*. Taiwan: Penghu County Cultural Center.
- Christie's (1992), *Islamic Art, Indian Miniatures, Rugs and Carpets*. Exhibition catalogue, Christie's, London (October).
- Clavijo, Ruy Gonzalez di (1928), *Narrative of the Spanish Embassy to the Court of Timur at Samarkand in the Years 1403–1406*, *Broadway Travellers*, trans. Guy Le Strange. London: Routledge.
- Clermont-Ganneau, Charles (1885–1907), *Recueil d'archéologie orientale*, 8 vols. Paris: Ernest Leroux.
- Codice (1733), *Codice diplomatico del sacro militare ordine Gerosolimitano oggi di Malta*, 2 vols., ed. S. Paoli. Lucca.
- Cohen, Amnon (1989), *Economic Life in Ottoman Jerusalem*, Cambridge Studies in Islamic Civilisation. Cambridge: Cambridge University Press.
- Cohen, Amnon and Bernard Lewis (1978), *Population and Revenue in the Towns of Palestine in the Sixteenth Century*. Princeton NJ: Princeton University Press.
- Contentau, Georges (1924), 'L'Institut Français d'Archéologie de l'Art à Damas', *Syria* 5: 203–11.
- Corbo, Virgilio (1965), *Ricerche archeologiche al Monte degli Ulivi*. Jerusalem: Franciscan Press.
- Coughenour, Robert (1976), 'Preliminary report on the exploration and excavation of Mugharat el-Wardeh and Abu Thawab', *ADAJ* 21: 71–78.
- Crowfoot, Grace (1932), 'Pots, ancient and modern', *PEFQS*: 179–87, pls. I–III.
- Crowfoot, John, Grace Crowfoot and Kathleen Kenyon (1957), *Objects from Samaria*. Vol. 3 of *Samaria Sebaste. Reports of the Joint Expedition in 1931–1933 and of the British Expedition of 1935*. London: PEF.
- Cuinet, Vital (1896), *Syrie, Liban et Palestine: géographie administrative*. Paris: Ernest Leroux.
- Cytryn-Silverman, Katia (1996), *The Islamic Period in North Sinai: The Pottery Evidence*. Unpublished MA thesis, Hebrew University, Jerusalem.
- Dagan, Yehuda (1992), *Archaeological Survey of Israel: Map of Lakhish (98)*. Jerusalem: Israel Exploration Society.
- Dar, Shimon (1984), 'Khirbet Summaqa—1983/1984', *ESI* 3: 98–101.
- (1987–88), 'Ḥorvat Summaqa', *ESI* 6: 98–99.
- (1993), *Settlements and Cult Sites on Mount Hermon, Israel. Ituraean Culture in Hellenistic and Roman Periods*. BAR International Series 589. Oxford: British Archaeological Reports.
- De Haas, Hubert, H. Eduard LaGro and Margreet Steiner (1989), 'First season of excavations at Tell Abū Šarbūt, 1988. A preliminary report', *ADAJ* 33: 323–26.
- De Haas, Hubert, H. Eduard LaGro and Margreet Steiner (1992), 'Second and third

- seasons of excavations at Tell Abū Ṣarbūt, Jordan valley (preliminary report)', *ADAJ* 36: 333–39.
- Delougaz, Pinhas and Richard Haines (1960), *A Byzantine Church at Khirbat al-Karak*, University of Chicago Oriental Institute publications 85. Chicago: Chicago University Press.
- Deschamps, Paul (1939), *Les Châteaux des Croisés en Terre Sainte, II. La défense du royaume de Jérusalem*, Bibliothèque archéologie et histoire, vol. 14. Paris: Paul Geuthner.
- (1942–43), ed. and trans., 'Étude sur un texte Latin énumérant les possessions Musulmanes dans le Royaume de Jerusalem vers l'année 1239', *Syria* 23: 86–104.
- De Vaux, Roland and A.-M. Steve (1950), *Fouilles de Qaryet el-'Enab, Abū Gōsh, Palestine*, École Biblique et Archéologique Française. Études Archéologiques. Paris: J. Gabalda.
- De Vries, Bert (1986), 'The Islamic bath at Tell Ḥesbān', in eds. L. Geraty and L. Herr, *The Archaeology of Jordan and other Studies presented to Siegfried H. Horn*. Berriens Springs MI: Andrews University Press: 223–35.
- (1998), ed., *Umm el-Ḥimal. A Frontier Town and its Landscape in Northern Jordan*. Journal of Roman Archaeology Supplementary Series 26. Portsmouth, RI: Journal of Roman Archaeology.
- Dimashqī, Muḥammad b. Abī Ṭālib (1866), *Cosmographie de Chems-ed-Din Abou Abdallah Mohammed ed-Dimachqui (Kitāb nukhbat al-dahr fi 'ajā'ib al-barr wa'l-bahr)*, ed. Michael Mehren. St Petersburg: Academie Imperiale des sciences.
- Diplôme (1900–1901), 'Un diplôme inédit d'Amaury I, roi de Jérusalem, en faveur de l'abbaye du Temple-Nostre-Seigneur (Acre, 6–11 avril 1166)', ed. Ferdinand Chandon, *ROL* 8: 311–17.
- Dols, Michael, *The Black Death in the Middle East*. Princeton NJ: Princeton University Press.
- Donner, Herbert (1992), *The Mosaic Map of Madaba: An introductory Guide*, Palaestina Antiqua 7. Kampen: Kok Pharos.
- Dornemann, Rudolph (1990), 'Preliminary comments on the pottery traditions at Tell Nimrin, illustrated from the 1989 season of excavations', *ADAJ* 34: 153–81.
- Dothan, Moshe (1955), 'Excavations at 'Afula', *'Atiqot* 1: 19–70.
- Doughty, Charles (1926), *Travels in Arabia Deserta*, 2 vols. London, 1888, repr. London: Jonathon Cape.
- Dozy, Reinhardt (1881), *Supplément aux dictionnaires arabes*, 2 vols. Leiden: Brill.
- Drory, Joseph (2003), 'Al-Nāṣir Dāwūd: a much frustrated prince', *al-Masāq* 15.2: 161–87.
- (2006), 'The prince who favored the desert: fragmentary biography of al-Nasir Ahmad (d. 745/1344)', in eds. David Wasserstein and Ami Ayalon, *Mamluks and Ottomans: Studies in Honour of Michael Winter*. Routledge Studies in Middle Eastern History. London and New York: Routledge: 9–33.
- Duc de Luynes, Albert (1871–76), *Voyage d'exploration à la Mer Morte, à Petra sur la Rive Gauche du Jourdain*, 3 vols. Paris.
- Du Plat Taylor, Joan (1938), 'Medieval graves in Cyprus', *AI* 5: 55–87.
- Du Plat Taylor, Joan and A. Megaw (1951), 'Cypriot Medieval glazed pottery-notes from a preliminary classification', *RDAC* 1937–1939: 1–13.
- Dupoizat, M.-F. (1995), 'The ceramic cargo of a Song dynasty junk found in the Philippines and its significance in the China-South East Asia trade', in eds. Rosemary Scott and John Guy, *South East Asia and China: Art, Interaction and Commerce*, *CAAA* 17: 205–24.
- Edbury, Peter (1997), *John of Ibelin and the Kingdom of Jerusalem*. Woodbridge: Boydell Press.
- Edelstein, Gershon and Miriam Avissar (1997), 'A sounding in old Acre', *'Atiqot* 31: *'Akko (Acre) Excavation Reports and Historical Studies*: 129–36.
- Ehrenkreutz, Andrew (1973), *Saladin*. Albany NY: State University of New York Press.

- Ellenblum, Roni (1995), 'Settlement and society formation in Crusader Palestine', in ed. Thomas Levy, *The Archaeology of Society in the Holy Land*. London: Leicester University Press: 503–11.
- (1998), *Frankish Rural Settlement in the Latin Kingdom of Jerusalem*. Cambridge: Cambridge University Press.
- Ellenblum, Roni, R. Rubin and G. Solar (1996), 'Khirbat al-Lawza, a Frankish farm in the Judean hills in central Palestine', *Levant* 28: 189–98.
- Ernoul (1871), *Chronique d'Ernoul et de Bernard le Trésorier*, ed. Louis de Mas Latrie. Paris: Mme Ve J. Renouard
- L'Estoire* (1967), *L'Estoire de Eracles empereur et la conquête de la terre d'Outremer* (continuation of William of Tyre, *Historia rerum in partibus transmarinis gestarum*), RHC (Occ.), 2: 1–481.
- Evliya Çelebi (1834–50), *Narrative of Travels in Europe, Asia and Africa in the Seventeenth Century*, 2 vols., trans. J. von Hammer. London: Oriental Translation Fund.
- Fabri, Felix (1843–49), *Evagatorium in Terrae Sanctae, Arabiae et Egypti peregrinationem*, ed. C. Hassler. Bibliothek des Literarischen Vereins in Stuttgart 2–4. Stuttgart: Gedruckt auf Kosten des Literarischen Vereins.
- Faroqhi, Suraiya (1994), *Pilgrims and Sultans: The Hajj under the Ottomans*. London and New York: IB Tauris.
- Faucherre, Nicholas (2004), 'La forteresse de Shawbak (Crac de Montréal), une des premières forteresses Franques sous son corset mamelouk', in eds. Nicholas Faucherre, Jean Mesqui and Nicholas Prouteau, *La fortification au temps des Croisades*. Rennes: Presses Universitaires de Rennes: 43–66.
- Ferrari, Virgilio (1990), *La ceramica graffita Ferrarese nei secoli XV–XVI*. Ferrara 1960 (reprinted Ferrara: Belriguardo 1990).
- Fischel, Walter (1959), trans. and ed., 'Ascensus Barcoch: a Latin biography of the Mamlūk sultan Barqūq of Egypt (d. 1399) Written by B. de Mignanelli', *Arabica* 6: 57–74, 152–72.
- Fitzgerald, Gerald (1931), *Beth-Shan Excavations, 1921–1923: The Arab and Byzantine Levels*, Publications of the Palestine Section of the Museum of the University of Pennsylvania 3. Philadelphia: Pennsylvania University Press.
- Flanagan, James, David McCreery and Khair Yassine (1992), 'Preliminary report on the 1990 excavation at Tell Nimrin', *ADAJ* 36: 89–112.
- (1994), 'Tell Nimrin: preliminary report of the 1993 season', *ADAJ* 38: 204–44.
- Fouquet, Daniel (1900), *Contribution à l'étude de la céramique orientale*, Extraits des mémoires de l'Institut Égyptien. Cairo: Institut Égyptien.
- François, Véronique (1998), 'La céramique médiévale d'Alexandrie: Kôm el-Dikka et Kôm el-Nadoura, deux dépotoirs de la période islamique', in Gayraud (1998).
- (2001), 'Elements pour l'histoire ottomane d'Aphrodisias: la vaisselle de terre', *Anatolia Antiqua* 9: 147–90.
- (2002), 'Production et consommation de vaisselle à Damas, l'époque ottomane', *BEO* 53–54, *Supplément: études et travaux à la citadelle de Damas, 2000–2001: un premier bilan*: 157–54.
- Frankel, Rafael and Nimrod Getzov (1997), *Archaeological Survey of Israel. Map of Akhziv (I)*. Jerusalem: Israel Exploration Society.
- Franken, Hendricus and J. Kalsbeck (1975), *Potters of a Medieval Village in the Jordan Valley. Excavations at Tell Deir 'Alla: A Medieval Tell, Tell Abu Gourdan, Jordan*, North-Holland Ceramic Studies in Archaeology 3. Amsterdam: North Holland.
- Frescobaldi, Leonardo, Giorgio Gucci and Simone Sigoli (1948), *A Visit to the Holy Places of Egypt, Sinai, Palestine and Syria in 1384 by Frescobaldi, Gucci and Sigoli*, trans. Theophilus Bellorini and Eugene Hoade, SBF 6. Jerusalem: Franciscan Press.
- Fretellus, Rorgo (1980), *Rorgo Fretellus. De Nazareth et sa description de la Terre Sainte. Histoire et édition du texte*, ed. with commentary P. Boeren. Koninklijke Nederlandse Akademie

- van Wetenschappen, Afdeling Letterkunde, Verhandelingen Nieuwe Reeks, Deel 105. Amsterdam and New York: North-Holland Publishing Company.
- Frierman, Jay (1969), 'Chinese ceramics from Ashkelon and Caesarea', *IEJ* 19: 44–45.
- Fulcher of Chartres (Fulcheri Cartonensis) (1913), *Historia Hierosolymitana (1095–1127)*, ed. Heinrich Hagenmeyer. Heidelberg: Carl Winters Universitätsbuchhandlung.
- (1969), *A History of the Expedition to Jerusalem, 1095–1127*, trans. Frances Ryan and ed. Harold Fink. Knoxville Tn.: University of Tennessee Press.
- Fulford, Michael (1977), 'Pottery and Britain's foreign trade in the later Roman period', in ed. D. Peacock, *Pottery and early Commerce: Characterization and Trade in Roman and later Ceramics*. London: Academic Press: 35–84.
- Funari, Pedro, Martin Hall and Siân Jones (1999), eds., *Historical Archaeology: Back from the Edge*. One World Archaeology. London and New York: Routledge.
- Gal, Zvi (1991), *Archaeological Survey of Israel: Map of Gazit (46)*. Jerusalem: Israel Exploration Society.
- Gaudefroy-Demombynes, Maurice (1923), *La Syrie à l'époque des Mamelouks*. Paris: Paul Geuthner.
- Gayraud, Roland-Pierre (1986), 'Céramiques trouvées lors de la restauration de la madrasa Tatār al-Ḥiḡṭaziyya (le Caire)', *An.Is.* 22: 35–49, pl. XVI–XXV.
- (1998), ed., *Colloque international d'archéologie islamique, IFAO, Le Caire, 3–7 février 1993*. Textes arabes et études islamiques 36. Cairo: Institut Français d'Archéologie Orientale.
- Gazetteer of Egypt* (1964), *Gazetteer no. 45: Egypt and the Gaza Strip*. Official standard Names approved by the United States Board on Geographic Names. Prepared by the Office of Geography, Dept. of the Interior. Washington, D.C.: US Mapping Agency.
- Gazetteer of Israel* (1970), *Gazetteer no. 114: Israel*. Official standard Names approved by the United States Board on Geographic Names. Prepared by the Geographic Names Division, U.S. Army Topographic Command. Washington, D.C.: US Mapping Agency.
- Gazetteer of Jordan* (1990), *Gazetteer of Jordan*. Names approved by the United States Board on Geographic Names. Published by the Defense Mapping Agency, 2nd edition. Washington, D.C.: US Mapping Agency.
- Gazetteer of Syria* (1983), *Gazetteer of Syria*. Names approved by the United States Board on Geographic Names. Published by the Defense Mapping Agency, 2nd edition. Washington, D.C.: US Mapping Agency.
- Geary, Patrick (1996), 'Sacred commodities: The circulation of medieval relics', in ed. Arjun Appadurai, *The Social Life of Things. Commodities in Cultural Perspective*. Cambridge: Cambridge University Press.
- Gelichi, Sauro (2006), 'The citadel of Ḥārim', in Kennedy (2006):184–200.
- Geoffrey of Vinsauf (1848), *Chronicle of Richard the First's Crusade* in ed. H. Bohn, *Chronicles of the Crusades*. London: G. Bell: 65–339.
- Gestes des Chiprois* (1967), *Les Gestes de Chiprois* in RHC (Doc.) 2: 651–872.
- Getzov, Nimrod (1996), 'Ḥorvat Bet Zeneta', *ESI* 15: 19.
- Ghawanma, Yusuf (1992), *Imarat al-Karak al-Ayyūbiyya*. Amman, 1402H.
- Ghazzī, Najm al-Dīn Muḥammad (1959), *al-Kawākib al-sā'ira bi a'yān al-mi'at al-āshira*, vol. 3, ed. J. Jabbūr. Beirut: Dar al-Afaq al-Jadidah.
- Gibb, Hamilton (1962), *Studies on the Civilization of Islam*, ed. S. Shaw and W. Polk. Princeton: Princeton University Press.
- Gibson, McGuire, James Armstrong and Augusta McMahon (1998), 'The city walls of Nippur and an Islamic site beyond: Oriental Institute excavations, 17th season, 1987', *Iraq* 60: 11–44.
- Gibson, Shimon, Bridget Ibbes and Amos Kloner (1991), 'The Sataf project of landscape archaeology in the Judean hills: a preliminary report on four seasons of survey and excavations (1987–1989)', *Levant* 23: 29–54.

- Gibson, Shimon, Sean Kingsley and J. Clarke (1999), 'Town and country in the southern Carmel: report on the landscape archaeology project at Dor', *Levant* 31: 71–121.
- Gichon, Mordechai and Robert Linden (1984), 'Muslim oil lamps from Emmaus', *IEJ* 34: 156–65, pls. 21, 22.
- Gittlen, Barry (1993), *Tel Mique—Ekron. Report of the 1984 Excavations. Field III SE*. Jerusalem: American Schools of Oriental Research and Israel Exploration Society.
- Glidden, H. (1952), 'The Mamluke origin of the fortified khan at al-ʿAqabah, Jordan', in ed. George Miles, *Archaeologica Orientalia in Memoriam Ernst Herzfeld*. Locust Valley NY: J. J. Augustin: 116–18.
- Glueck, Nelson (1939), 'Explorations in eastern Palestine, III', *AASOR* 18–19.
- Goitein, Shlomo (1958), 'The main industries of the Mediterranean area as reflected in the records of the Cairo Geniza', *JESHO* 1: 168–97.
- (1967–93), *A Mediterranean Society: The Jewish Communities of the Arab World as portrayed in the Documents of the Cairo Geniza*, 5 vols. Berkeley and Los Angeles Ca.: University of California Press.
- Golombek, Lisa, Robert Mason and Gauvin Bailey (1996), *Tamerlane's Tableware. A new Approach to the Chinoiserie Ceramics of Fifteenth- and Sixteenth-Century Iran*, Islamic art and architecture series 6. Toronto: Royal Ontario Museum.
- Golvin, Lucien (1980), 'A la recherche de la cité médiévale de Balis (Moyen-Euphrate)', in ed. J. Margueron, *Le Moyen-Euphrate. Zone de contacts et d'échanges. Actes du colloque de Strasbourg 10–12 Mars 1977*, Travaux du centre de recherche sur le Proche-Orient et la Grèce antiques, Université des sciences humaines de Strasbourg 5. Leiden: Brill: 389–96.
- Gonnella, Julia (2000), 'Eine neue zangische-aiyubidische Keramikgruppe aus Aleppo', *DM* 11: 163–75, pl. 26.
- (2006), 'The citadel of Aleppo: recent studies', in Kennedy (2006): 165–75.
- Gophna, Ram and Itzhaq Beit-Arieh (1987), *Archaeological Survey of Israel. Map of Lod (80)*. Jerusalem: Israel Exploration Society.
- Govrin, Yehuda (1991), *Archaeological Survey of Israel: Map of Nahal Yattir (139)*. Jerusalem: Israel Exploration Society.
- Grabar, Oleg, Jean Perrot, Bezalel Ravani and Myriam Rosen (1960), 'Sondages à Khirbet al-Minyeh', *IEJ* 10: 226–45.
- Grabar, Oleg, Renata Holod, James Knustad and William Trousdale (1978), *City in the Desert: Qasr al-Hayr East*, Harvard Middle Eastern Monographs 23/24. Cambridge MA: Harvard University Press.
- Grant, Elihu and George Wright (1938–39), *Ain Shems Excavations (Palestine). Part IV: Pottery and part V: Text*, Biblical and Kindred Studies 7, 8. Haverford, Pn: Haverford College.
- Grey, Anthony (1994), 'The pottery of the later periods from Tell Jezreel: an interim report', *Levant* 26: 51–62.
- Grube, Ernst (1976), *Islamic Pottery of the Eighth to the Fifteenth Century in the Keir Collection*. London: Faber and Faber.
- Gubser, Peter (1973), *Politics and Change in al-Karak, Jordan*. Oxford: Oxford University Press.
- Gyllensvard, Bo (1973), 'Recent finds of Chinese ceramics at Fostat. I', *BMFEA* 45: 99–119, figs. 1–78, pls. 1–26.
- Gyllensvard, Bo (1975), 'Recent finds of Chinese ceramics at Fostat. II', *BMFEA* 47: 93–117, figs. 1–10, pls. 1–44.
- Hadad, Shulamit (1999), 'Oil lamps from the Abbasid through the Mamluk periods at Bet Shean', *Levant* 31: 203–24.
- Hadidi, Adnan (1989), 'The pottery from Tell Siran', in ed. Henry Thompson, *Archaeology in Jordan*. New York: P. Lang: 136–52.

- Haiman, Mordechai (1993), *Archaeological Survey of Israel: Map of Har Ḥamran southeast (199)*. Jerusalem: Israel Exploration Society.
- Hakimian, Suzy and Ḥassān Salamé-Sarkis (1988), 'Céramiques médiévales trouvées dans une citerne à Tell 'Arqa', *Syria* 65: 1–64.
- Hamarnah, Sami Khalaf (1974), *The Physician, Therapist and Surgeon, Ibn al-Quff (1233–1286. An Introductory Survey of his Time, Life and Works*. Cairo: Atlas Press.
- Hamarnah (al-Ḥamārnah), Ṣālīḥ (1977–78), 'Sugar cane cultivation and refining under the Arab Muslim during the Middle Ages', (Arabic text with English summary), *ADAġ* 22: 12–19 (Arabic section).
- Hamdānī, al-Ḥasan ibn Aḥmad (1884–91), *Geographie der arabischen Halbinsel (Kūṭāb al-ṣifāt jazīrat al-'arab)*, 2 vols., ed. David Muller. Leiden: Brill.
- Hamilton, Bernard (1978), 'The Elephant of Christ: Reynald of Châtillon', in ed. Derek Baker, *Religious Motivation: Biographical and Sociological Problems for the Church Historian*. Oxford: Ecclesiastical History Society and Basil Blackwell.
- Hammond, P. (1970), *The Crusader Fort on el-Habis, Petra: its Survey and Interpretation*, Middle East Center, University of Utah, Research Monographs 2. Salt Lake City: University of Utah.
- Hanbury-Tenison, John (1984), 'Wadi Arab survey 1983', *ADAġ* 28: 385–423.
- (1987), 'Jarash region survey', *ADAġ* 31: 129–57.
- Hansman, John (1985), *Ḥulḥān, an Arabian Port, its Settlement and Far Eastern Ceramic Trade from the 14th to the 18th Centuries*, Royal Asiatic Society of Great Britain and Ireland Prize Publication Fund 22. London: Royal Asiatic Society.
- Harawī, Abū al-Ḥasan 'Alī b. Abī Bakr (1953), *Kūṭāb al-ishārat ilā ma'rīfat al-ziyārat*, ed. J. Sourdel-Thomine. Damascus: Institut Français de Damas.
- (1957), *Guide des lieux de pèlerinage*, trans. J. Sourdel-Thomine. Damascus: Institut Français de Damas.
- Harlan, J. (1981), 'Natural resources of the Southern Ghor', *AASOR* 46: 155–64.
- Harper, Richard and Denys Pringle (2001), *Belmont Castle. The Excavation of a Crusader Stronghold in the Kingdom of Jerusalem*. British Academy Monographs 10. Oxford: Oxford University Press.
- Harrison, R. Martin (1986), (with additional material by John Hayes), *Excavations at Sarachane, Istanbul: The Church of Polyuktos*. Princeton NJ: Princeton University Press and Dumbarton Oaks.
- Hart, Stephen (1987), 'Five soundings in southern Jordan', *Levant* 19: 33–47.
- Hart, Stephen and Robin Falkner (1985), 'Preliminary report on a survey in Edom, 1984', *ADAġ* 29: 255–77.
- Hasluck, Frederick (1929), *Christianity and Islam under the Sultans*, 2 vols., ed. Margaret Hasluck. Oxford: Clarendon Press.
- Hauptmann, Andreas (2005), *Zur frühen Metallurgie des Kupfers in Fenan/Jordanien*. Der Anschnitt. Zeitschrift für Kunst und Kultur Bergbau 11. Bochum: Deutsches Bergbau-Museum.
- Hauptmann, Andreas and Weisgerber, G. (1987), 'Archaeometallurgical and mining-archaeological investigations in the area of Feinan, Wadi 'Arabah (Jordan)', *ADAġ* 31: 419–37.
- Hayes, John (1980), 'Turkish clay pipes: a provisional typology', in ed. P. Davey, *The Archaeology of the Clay Tobacco Pipe, No. 4*, BAR International Series 92. Oxford: British Archaeological Reports: 3–10.
- Henderson, Julian (2000), *The Science and Archaeology of Materials: An Investigation of inorganic Materials*. London and New York: Routledge.
- Hendrix, Ralph, Philip Drey, and J. Bjornar Storfjell (1996), *Ancient Pottery of Transjordan. An Introduction utilizing published whole Forms. Late Neolithic through Late Islamic*. Berriens Springs MI: Horn Archaeological Museum.
- Herr, Larry (1991), 'Pottery typology and chronology', in eds. Larry Herr, Lawrence Geraty, Øystein LaBianca and Randall Younker, *Madaba Plains Project. The 1987*

- Season at Tell el-Umeiri and Vicinity and Subsequent Studies*. Berriens Springs: Andrews University Press: 232–45.
- Herr, Larry and Warren Trenchard (1996), *Published Pottery of Palestine*. Atlanta: American Schools of Oriental Research.
- Hesse, Brian and Paula Wapnish (1997), 'Can pig remains be used for ethnic diagnosis in the ancient Near East?' in eds. Neil Silberman and David Small, *The Archaeology of Israel: Constructing the Past, Interpreting the Present*. Journal for the Study of the Old Testament. Supplementary Series 237. Sheffield: Sheffield Academic Press: 238–70.
- Heyd, Uriel (1960), *Ottoman Documents on Palestine, 1552–1615: A Study of the Firman according to the Mühimme Defteri*. Oxford: Oxford University Press.
- Hill, G. (1922), *Catalogue of the Greek coins of Arabia, Mesopotamia, and Persia in the British Museum*. London: British Museum.
- Hirschfeld, Yizhar (1985), *Archaeological Survey of Israel: Map of Herodium (108/2) 17–11*. Jerusalem: Israel Exploration Society.
- (1997), 'Tiberias', *ESI* 16: 35–40.
- Hiyari, Mustafa (1975), 'The origins of the development of the amirate of the Arabs during the seventh/thirteenth and eighth/fourteenth centuries', *BSOAS* 38: 509–24.
- Hobson, Robert (1926–27), 'Chinese porcelain fragments from Aidhab, and some Bashpai inscriptions', *TOCS*: 14–22.
- (1937), 'The later al-Mina pottery', *BMQ* 11: 115–16, pl. XXX.b.
- Hobson, Robert and W. Percival (1933–34), 'Chinese porcelain from Constantinople', *TOCS*: 9–21.
- Holt, Peter (1995), *Early Mamluk Diplomacy (1260–1290)*. *Treaties of Baybars and Qalāwūn with Christian Rulers*, Islamic History and Civilization. Studies and Texts 12. Leiden: E. J. Brill.
- Hudūd* (1937), *Hudūd al-‘ālam, regions of the world: a Persian geography 372/982*, trans. and annotated Vladimir Minorsky. Oxford: Oxford University Press.
- Hughes-Stanton, Penelope and Rose Kerr (1980), *Kiln Sites of Ancient China. An Exhibition lent by the People's Republic of China*. London: British Museum and the Oriental Ceramic Society.
- Humphreys, Stephen (1977), *From Saladin to the Mongols, the Ayyubids of Damascus, 1193–1260*. Albany NY: SUNY Press.
- Hütteroth, Wolf-Dieter and Kamal Abdulfattah (1977), *Historical Geography of Palestine, Transjordan and Southern Syria in the late Sixteenth Century*, Erlanger geographische Arbeiten 5. Erlangen: Palm und Enke.
- Ibach, Robert (1987), *Archaeological Survey of the Hesban Region: Catalogue of Sites and Characterization of Periods*, eds. Lawrence Geraty and Øystein LaBianca, *Hesban* 5. Berrien Springs, Mi.: Andrews University Press.
- Ibn ‘Abd al-Zāhir, Muḥyī al-Dīn ‘Abd Allāh (1976), *al-Rawḍ al-zāhir fī sīrat al-malik al-zāhir*, ed. ‘Abd al-‘Azīz al-Khuwaytar. Riyadh, 1396H.
- Ibn Abī al-Faḍā’il, Mufaḍḍal (1916–20), *Mufaḍḍal ibn Abil-Fazāil: Histoire des sultans Mamlouks (Kūtāb al-nahj al-saḍūd)*, trans. and ed. Edgar Blochet (repr. from *PO* XII, fasc. 3, XIV, fasc. 3). Paris.
- Ibn al-‘Amīd, al-Makīn Jirjis b. al-‘Amīd Abī al-Makārim b. Abī al-Ṭayyib (1994), *Chronique des Ayyoubides (602–658/1205–6–1259–60)*, (*Akhbār Ayyūbiyyin*), trans. and annotated Anne-Marie Eddé and François Micheau, Documents relatifs à l'histoire des Croisades publiés par l'Académie des inscriptions et belles-lettres 16. Paris: Académie des inscriptions et belles-lettres.
- Ibn al-Athīr, ‘Izz al-Dīn ‘Alī b. Muḥammad (1969), *Extrait de la chronique intitulée ‘Kamel al-tawārīkh’* (excerpt from *Kūtāb kāmīl al-tawārīkh*), *RHC* (Or.), 1: 187–744; 2.1: 1–180.
- Ibn Baṭṭūṭa, Muḥammad b. ‘Abd Allāh (1853–58), *Voyages d’ibn Batoutah (Tuhfat al-nuẓẓār fī gharā’ib al-amsār wa ‘ajā’ib al-asfār)*, 4 vols., ed. and trans. Charles Defrémery and B. Sanguinetti. Paris.

- (1958–2000), *The Travels of Ibn Baṭṭūṭa*, A.D. 1325–1354, 5 vols., trans. Hamilton Gibb. Cambridge: Cambridge University Press.
- Ibn Bayṭār, ‘Abd Allāh ibn Aḥmad (1874), *Kitāb al-jāmi‘ fi’l-adwiyat al-mufradat*, 4 vols. Bulaq, 1291H.
- Ibn al-Dawādārī, Abū Bakr b. ‘Abd Allāh b. Aybak (1961–92), *Die Chronik des Ibn al-Dawādārī (Kanz al-durar wa-jāmi‘ al-ghurar)*, 9 vols., various eds. Cairo and Wiesbaden: Franz Steiner.
- Ibn al-Furāt, Muḥammad b. ‘Abd al-Raḥīm (1936–42), *Tārīkh ibn al-furāt*, vols.7, 9, ed. Constantin Zurayq. Beirut: al-Matbaah al-Amirkaniyah.
- (1971), *Ayyubids, Mamluks and Crusaders: Selections from the Tārīkh al-duwal wa-l-mulūk of Ibn al-Furāt*. 2 vols. (text and translation), trans. and ed. Ursula Lyons and Malcolm Lyons with historical introduction by Jonathon Riley-Smith. Cambridge: Heffers.
- Ibn Ḥajar al-‘Asqalānī, Aḥmad ibn ‘Alī (1929–31), *al-Durar al-kāmina fi ‘ayān al-mi‘at al-thāmina*. Hyderabad.
- Ibn Hawqal, Muḥammad Abū al-Qāsim (1873), *Viae et regna, descriptio ditionis moslemicae (Kitāb al-masālik wa’l-mamālik)*, ed. Michael de Goeje, BGA 2. Leiden: Brill.
- Ibn Iyās, Abū al-Barakat Muḥammad b. Aḥmad al-Hanafī (1960–74), *Die Chronik des Ibn Iyās (Badā‘i‘ al-zuhūr fi waqā‘i‘ al-duḥūr)*, 5 vols., ed. Muhammad Mustafa, Moritz Sobernheim and Paul Kahle. Cairo.
- Ibn al-Jawzī, Abū al-Faraj ‘Abd al-Raḥman b. ‘Alī (1907), *Mir‘at al-zamān fi tārikh al-‘ayān*, fasc. ed. J. Jewett. Chicago.
- Ibn al-Jawzī, Yūsuf b. Qizughlu (known as Sibṭ) (1969), *Extraits du Mirat ez-zaman* (excerpt from *Mir‘at al-zamān fi tārikh al-‘ayān*), RHC (Or.) 3: 510–70.
- Ibn al-Jazarī, Shams al-Dīn Muḥammad b. Ibrāhīm (1949), *La chronique de Damas d’al-Jazarī (Années 689–698 H.)* (excerpt from *Hawādīth al-zamān wa-anbā’uhu wa-wafayat al-akābir wa’l-‘ayān min abnā’ihī*), trans. Jean Sauvaget. Paris: H. Champion.
- Ibn Jubayr, Muḥammad ibn Aḥmad (1907), *The Travels of Ibn Jubayr (Rihla)*, ed. William Wright with additions and corrections by Michael de Goeje, E.J.W. Gibb Memorial Series 5. Oxford: Oxford University Press.
- Ibn Khaldūn, ‘Abd al-Raḥmān b. Muḥammad (1868), *Kitāb al-‘ibar wa-dūwān al-mubtada’ wa’l-khabar fi ‘ayyān wa’l-‘ajam wa’l-barbar wa-man ‘asarahum min dhawī ‘l-sullān al-akhbār*, 7 vols. Bulaq, 1284H.
- Ibn Khurdādhbih, Abū al-Qāsim ‘Ubayd Allāh b. ‘Abd Allāh (1889), *Liber viarum et regnarum (Kitāb al-masālik wa’l-mamālik)*, ed. M. de Goeje, BGA 6. Leiden: Brill.
- Ibn al-Qalānisī, Ḥamza b. Asad (1908), *History of Damascus, 363–555 A.H. (Dhayl ta’rikh dimashq* being a continuation of *Hilāl al-sābi*), ed. and annotated Henry Amedroz. Leiden: Brill.
- Ibn Rustah, Abū ‘Alī Aḥmad b. ‘Umar (1892), *Kitāb al-‘alāq al-naḥṣa*, ed. Michael de Goeje, BGA 7. Leiden: Brill.
- Ibn Ṣaṣrā, Muḥammad b. Muḥammad (1963), *A Chronicle of Damascus, 1389–97* (excerpt of *al-Durrat al-mudī‘a fi’l-dawlat al-zāhirīyya*), 2 vols., ed. and trans. William Brinner. Berkeley and Los Angeles: University of California Press.
- Ibn Shaddād, ‘Izz al-Dīn Muḥammad b. ‘Alī (1953), *La description d’Aleḥ d’ibn Ṣaddād*, vol. 1, pt. 1 (excerpt from *al-‘Alāq al-khaṭīra fi dhikr umarā’ al-shām wa’l-jazīra*), ed. Dominique Sourdel. Damascus: Institut Français de Damas.
- (1963), *Liban, Jordanie, Palestine. Topographie historique d’ibn Ṣaddād, historien et géographe mort à Aleḥ en 684/1285* (excerpt from *al-‘Alāq al-khaṭīra fi dhikr umarā’ al-shām wa’l-jazīra*), ed. Sami Dahan. Damascus.
- Ibn Taghrībīrdī, Abū al-Maḥāsīn Jamal al-Dīn Yūsuf (1909–36), *Abū’l-Maḥāsīn ibn Taghrībīrdī’s annals al-Nujūm al-zāhira fi mulūk miṣr wa’l-qāhira*, 7 vols., ed. William Popper. Berkeley and Los Angeles: University of California Press.
- Ibn Ṭulūn, Shams al-Dīn Muḥammad b. ‘Alī (1962–64), *The Chronicle of Ibn Ṭulūn (Mufākhat al-killān fi hawādīth al-zamān)*, 2 vols., ed. Muhammad Mostafa. Cairo: Wizarat al-Thaqafa.

- Ibn al-Ukhuwwa, Diyā' al-Dīn Muḥammad b. Muḥammad al-Qurayshī al-Shafī'ī (1938), *The ma'ālīm al-qurba fī ahkām al-ḥisba*, ed. with an abstract of the contents Reuben Levy, E.J.W. Gibbs Memorial New Series 12. London: Luzac.
- Ibn al-Wardī, Sirāj al-Dīn 'Umar b. al-Muzaffār (1766), *Excerptum geographorum de Terra Syriae. Geographia historia naturalis* (excerpts from *Kharīdat al-'ajā'ib wa-farīdat al-gharā'ib*). Appended to Abū al-Fidā', *Tabulae Syriae (Tawqīm al-buldān)*, ed. with Latin trans. Johann Koechler and J. Reiske. Leipzig.
- Ibn al-Wāṣil, Muḥammad b. Salīm (1953–77), *Mufarrij al-kurūb fī akhbār banī ayyūb*, 5 vols., ed. Jamal al-Dīn al-Shayyal. Cairo: Matbaah Jamiat Fuad Awwal.
- Ibrahim, Mo'awiyah, James Sauer and Khair Yassine (1976), 'The East Jordan Valley survey, 1975', *BASOR* 222: 41–66.
- Idrīsī, Abū 'Abd Allāh, Muḥammad b. Muḥammad b. 'Abd Allāh b. Idrīs al-Hammūdī al-Ḥasanī (1971–84), *Opus geographicum, sive, liber ad eorum delectationem qui terras peregrare studeant (Kūtāb nuḥḥat al-muḥtāq fī 'ikhtirāq al-'afāq)*, ed. Alessio Bombaci et al. Naples and Rome: Istituto Universitario Orientale di Napoli.
- 'Imad al-Dīn al-Iṣfahānī, Muḥammad b. Muḥammad al-Kātib (1972), *Conquête de la Syrie et de la Palestine par Saladin (al-Fath al-qussī fī fath al-qudsī)*, Documents relatifs à l'histoire des Croisades 10, trans. and ed. Henri Massé. Paris: Paul Geuthner.
- Ilan, Z. and A. Druks (1984), 'Khirbet Marus—1984', *ESI* 3: 73–76.
- Ilan, Z. and E. Damati (1985), 'Khirbet Marus (Meroth)—1985', *ESI* 4: 64–68.
- Iliif, Lauri and Robin Brown (1991), *Notes on the Museum Registration Numbers for the Moab Survey Collection*. Unpublished records of Michael C. Carlos Museum, Emory University, Atlanta GA.
- Insoll, Timothy (1999), *The Archaeology of Islam*. Social Archaeology. Oxford: Blackwell Publishers.
- Institut du Monde Arabe (2002), *L'Orient de Saladin, l'art des Ayyoubides*. Paris: Institut du Monde Arabe and Gallimard.
- Irby, Charles and James Mangles (1823), *Travels in Egypt and Nubia, Syria and Asia Minor during the Years 1817 and 1818*. London: T. White.
- Irwin, Robert (1986), *The Middle East in the Middle Ages: The early Mamluk Sultanate, 1250–1382*. Beckenham 1977 (repr. Carbondale Ill., 1986).
- Iṣṭakhri, Abū Ishāq Ibrāhīm b. Muḥammad al-Fārisī (1870), *Viae regnorum, descriptio ditiosis moslemicae (Kūtāb masālik al-mamālik)*, ed. Michael de Goeje, BGA 1. Leiden: Brill.
- Jacob of Verona (1950), *Liber peregrinationis di Jacopo da Verona*, Nuovo Ramusio 1, ed. Ugo Monneret de Villard. Rome: La Libreria della Stato.
- Jacobs, Linda (1983), 'Survey of the south ridge of Wadi 'Isal, 1981', *ADAJ* 27: 245–273.
- Jacques of Vitry (Iacobi de Vitriaco) (1611), *Historia Hierosolymitana*, ed. Jacques Bongars in *Gesta Dei Francos, sive orientalium expeditionum et regni Francorum Hierosolymitani*, vol. 1, pt. 2. Hanover: J. Aubrii: 1047–1149.
- Jakeman, Jane (1993), *Abstract Art and Communication in 'Mamluk' Architecture*. Unpublished PhD thesis, University of Oxford.
- Jean d'Ibelin (1690), *Coustoumes de beauvoises, assises et bon usages du Royaume de Jérusalem*, ed. Gaspard Thaumassière. Paris.
- (1841), *Assises de Jérusalem: tome premier, assises de la haut cour*, ed. le Comte Albert Beugnot, *Recueil des historiens des Croisades. Lois* 1. Paris: Académie des Inscriptions et Belles-lettres.
- (1843), *Assises de Jérusalem: tome deuxième, assises de la cour des bourgeois*, ed. le Comte Albert Beugnot, *Recueil des historiens des Croisades. Lois* 2. Paris: Académie des Inscriptions et Belles-lettres.
- Jenkins, Marilyn, 'Mamluk underglaze-painted pottery: foundations for future study', *Muqarnas* 2: 95–114.
- Jenyns, Soame (1953), *Ming Pottery and Porcelain*. London: Faber and Faber.

- Joel, Guillermina (1992), 'Céramiques glaçurées d'époque Islamique trouvées à Tòd', *An.Ls.* 26: 1–18.
- Johns, Cedric (1932), 'Medieval 'Ajlūn. I. The castle (Qal'at al-Rabad)', *QDAP* 1: 21–33.
- (1934a), 'Medieval slip-ware from Pilgrims' castle, 'Atlīt (1930–1)', *QDAP* 3: 137–44, pls. XLIV–LVII.
- (1934b), 'Excavations at Pilgrims' castle, 'Atlīt (1932): the ancient tell and outer defences of the castle', *QDAP* 3: 145–64, pls. LVIII–LXXV.
- (1935), 'Excavations at Pilgrims' castle, 'Atlīt (1932/3): stables at the south west of the suburb', *QDAP* 5: 31–60.
- (1950), 'The citadel, Jerusalem. A summary of work since 1934', *QDAP* 14: 121–90, pls. XVIII–XXVIII.
- Johns, Jeremy (1995), 'The *Longue Durée*: state and settlement strategies in southern Transjordan across the Islamic centuries', in eds. Eugene Rogan and Tariq Tell, *Village, Steppe and State. The Social Origins of Modern Jordan*. London and New York: British Academic Press: 1–31.
- (1997), 'Karak', in ed. Eric Meyers, *Encyclopaedia of Near Eastern archaeology*, vol. 3. Oxford: Oxford University Press: 280–83.
- (1998), 'The Rise of Middle Islamic hand-made geometrically-painted ware in Bilād al-Shām (11th–13th centuries A.D.)', in Gayraud (1998): 65–93.
- (unpublished draft), *Settlement and Land Exploitation Strategies in the Arḍ al-Karak during the Islamic Period*. Unpublished draft for Johns (1995).
- Johns, Jeremy, Alison McQuitty and Robin Falkner, 'The Fāris project: preliminary report upon the 1986 and 1988 seasons', *Levant* 22: 63–95.
- Jones, R., Tompsett, G., Politis, K. and Photo-Jones, E. (2000), 'The Ṭawāhīn as-Sukkar and Khirbat ash-Shaykh 'Isa project. Phase I: the surveys', *ADAJ* 34: 523–34.
- Kahle, Paul (1956), 'Chinese porcelain in the lands of Islam', and 'Supplement', repr. in *Opera Minora*. Leiden: Brill: 326–50 and 351–61.
- Kaplan, Joseph (1959), 'Excavations at the White Mosque in Ramla', *Atiqot* 2: 106–15, pls. XV–XVI.
- Kareem, Juma' (1988), 'Tell Fendi. Jisr Shekh Hussein project, 1986: site identifications: A and B', *NIAAYU* 5/1: 8–10.
- (1989), 'Tell Fendi: Jisr Sheikh Hussein project, 1986', *ADAJ* 33 (1989), pp. 97–110.
- (1992), 'Darb al-Quful in the light of archaeological and historical evidence', *NIAAYU* 13: 3–8.
- (1996), 'A newly discovered tombstone from North Shunch, Jordan', *PEQ* 128: 125–30.
- (1998), 'The site of Dhirā' al-Khān: a main caravanserai on the Darb al-Quful', *SHAJ* 6: 365–69.
- (2000), *The Settlement Patterns in the Jordan Valley in the Mid to Late Islamic Period*. British Archaeological Reports International Series 877. Oxford: Archaeopress.
- Kawatoko, Mutsuo (2001), 'Coffee trade in the al-Ṭūr port, South Sinai', in Tuchscherer (2001): 51–66.
- Keall, Edward (1981), 'Some observations on the Islamic remains of the Dakhleh Oasis', *Society for the Study of Egyptian Antiquities Journal* 11: 213–23.
- Kedar, Benjamin and Denys Pringle (1985), 'La Fève: a Crusader castle in the Jezreel valley', *IEJ* 35: 164–79.
- Kennedy, Hugh (1994), *Crusader Castles*. Cambridge: Cambridge University Press.
- (2006), *Muslim Military Architecture in Greater Syria: From the Coming of Islam to the Ottoman Period*. History of Warfare 35. Leiden and Boston: Brill.
- Kennedy, David and Philip Freeman (1995), 'Southern Hauran survey, 1992', *Levant* 27: 39–73.
- Kerestes, Terrence, John Lundquist, Bryant Woods and Khair Yassine (1977–78), 'An archaeological survey of three reservoir areas in northern Jordan, 1978', *ADAJ* 22: 108–35.

- Kessler, Adam (1993), ed., *Empires beyond the Great Wall: The Heritage of Genghis Khan*. Los Angeles: Natural History Museum of Los Angeles County.
- Khadija, Lynn (1992), 'Designs painted on Ayyubid/Mamluk pottery at Rujm el-Kursi', *ADAJ* 36: 345–56.
- Khalil al-Zāhiri, Khalil ibn Shāhīn (1894), *Ṣoubdat kachf el-mamalik. Tableau politique et administratif de l'Égypte, et de Syrie et du Hidjaz sous la domination des sultans Mamlouks du XII^e au XV^e siècle (Ṣubda kashf al-mamālik wa bayan al-turuq wa'l-masālik)*, ed. Paul Ravaisse. Paris.
- Khouri, Rami (1988), *The Antiquities of the Jordan Rift Valley*. Amman: Department of Antiquities.
- Killick, Alistair (1983), 'Udruh—the frontier of an empire: 1980 and 1981 seasons, a preliminary report', *Levant* 15: 110–31.
- (1987), *Udruh: Caravan City and Desert Oasis. A Guide to Udruh and its Surroundings*. Romsey: A.C. Killick.
- Kind, Hans-Dieter, Karl Josef Gilles, Andreas Hauptmann and Gerd Weisgerber (2005), 'Coins from Wadi Faynan, Jordan', *Levant* 37: 169–95.
- King, Geoffrey (1989), 'Feinan' in eds. D. Homès-Fredericq and J. Hennessy, *Archaeology of Jordan II.1. Field Reports. Surveys and Sites A–K*, Akkadica Supplementum 7. Leuven: Peeters: 225–27.
- (1989), 'Survey of Byzantine and Islamic sites in Jordan: third preliminary report (1982). The Wadi 'Arabah (part 2)', *ADAJ* 33: 199–215.
- King, Geoffrey, Cherie Lenzen, Amy Newhall, J. King and J. Deemer (1987), 'Survey of Byzantine and Islamic sites in Jordan: third season preliminary report (1982). The southern Ghor', *ADAJ* 31: 439–459.
- Kloner, Amos and Michael Cohen (1998), 'Bet Guvrin—1994', *ESI* 17: 151–53.
- Knapp, A. Bernard (1992), ed., *Archaeology, Annales, and Ethnohistory*. New Directions in Archaeology. Cambridge and New York: Cambridge University Press.
- Knauf, Ernst, 'Feinan, Wadi', in ed. David Freeman, *The Anchor Bible Dictionary*, vol. 2. New York: Doubleday: 780–82.
- Kochavi, Moshe (1977), *Aphek—Antipatris. Five Seasons of Excavations at Tel Aphek-Antipatris (1972–1976)*. Tel Aviv: Israel Exploration Society.
- Kochavi, Moshe, and Itzhay Beit-Arieh (1994), *Archaeological Survey of Israel: Map of Rosh Ha'ayin (78)*. Jerusalem: Israel Exploration Society.
- Kosso, Peter (1995), 'Epistemic independence between textual and material evidence', in ed. David Small, *Methods in the Mediterranean: Historical and Archaeological Views on Texts and Archaeology*. Mnemosyne: Bibliotheca Classica Batava. Leiden and New York: Brill: 177–96.
- Kouchakji, F. (1923), 'Glories of er Rakka pottery', *International Studio* 86 (March): 5.15–5.24.
- Kubiak, Wladyslaw (1969), 'Overseas pottery trade of Medieval Alexandria as shown by recent archaeological discoveries', *FO* 10: 5–30.
- (1970), 'Medieval oil lamps from Fuṣṭāṭ', *AO* 8: 1–8.
- (1998), 'Pottery from the North-Eastern Mediterranean countries found in Fustat', in Gayraud (1998): 335–46.
- Kubiak, Wladyslaw and George Scanlon (1979), 'Fustat expedition: preliminary report 1971, part 1', *JARCE* 16: 103–24, pls. XI–XVIII.
- Kühnel, Ernst (1938), *Die Sammlung türkischer und islamischer Kunst im Tschinili Köschk*. Berlin.
- LaBianca, Øystein and Bethany Walker (2001), 'Countering the urban bias in Islamic studies', *ACORN* 13.1: 9–10.
- LaGro, H. Eduard and Hubert de Haas (1988), 'Announcing a study of Islamic pottery from Tell Abu Sarbut (Jordan)', *NDPT* 6: 89–96.
- (1989–90), 'Sugar pots, a preliminary study of technical aspects of a class of Medieval pottery from Tell Abu Sarbut, Jordan', *NDPT* 7–8: 7–20.
- La Monte, John (1932), *Feudal Monarchy in the Latin Kingdom of Jerusalem, 1100–1291*.

- Monographs of the Medieval Academy of America 4. Cambridge MA: Medieval Academy of America.
- Lancaster, William and Fidelity Lancaster (1995), 'Land use and population in the area north of Kerak', *Levant* 27: 103–24.
- Lane, Arthur (1938), 'Medieval finds at Al Mina in north Syria', *Archaeologia* 87: 19–78.
- (1949), 'Archaeological excavation at Kom el Dik: A preliminary report on the Medieval pottery', *FUBFA* 5: 143–47.
- (1957), *Later Islamic Pottery, Persia, Syria, Egypt, Turkey*. London: Faber.
- Langendorf, Jean-Jacques and G. Zimmermann, 'Trois monuments inconnus des Croisés', *Genava*, new ser., 12: 125–43.
- Laoust, Henri (1952), trans. and ed., *Les Gouverneurs de Damas sous les Mamlouks et les premiers Ottomans (658–1156)* (excerpts from works of Ibn Ṭūlūn and Ibn Juma'ā). Damascus: Institut Français de Damas.
- Lapidus, Ira (1967), *Muslim Cities in the later Middle Ages*. Cambridge MA: Harvard University Press.
- Lebeau, Marc, Eric Gubel and J.-Y. Monchambert (1985), 'Rapport sur la première campagne de fouilles a Tell Melebiya (Moyen-Khabour, printemps 1985)', *Akkadika* 45: 1–32.
- Legner, Anton (1964), 'Islamische Keramik in Resafa', *AAAS* 14: 98–108.
- Leiser, Gary (1976), 'The Crusader raid in the Red Sea in 578/1182–83', *JARCE* 13: 87–100.
- Leonard, Albert (1987), 'The Jerash-Tell el-Ḥuṣn highway survey', *ADAḡ* 31: 343–90.
- Levanoni, Amelia (1995), *A Turning Point in Mamluk History: The third Reign of al-Nāṣir Muḥammad ibn Qalāwūn (1310–1341)*. Islamic History and Civilization. Studies and Texts 10. Leiden and New York: Brill.
- Lewis, Bernard (1954), 'Studies in the Ottoman archives, 1', *BSOAS* 16: 496–501.
- Libbey, William and Franklin Hoskins (1905), *The Jordan Valley and Petra*, 2 vols. New York and London.
- Lindner, Manfred (1999), 'Late Islamic villages in the Greater Petra region and medieval "Hormuz"', *ADAḡ* 33: 479–500.
- Lindner, Manfred, Ernst Knauf and John Zeidler (1996), 'An Edomite fortress and a Late Islamic village near Petra (Jordan): Khirbat al-Mu'allaq', *ADAḡ* 40: 111–36.
- Lipinska, Jadwiga and Henry Riad (1966), 'Trial pits at Kom el-Dikka in Alexandria', *Annales du Service des Antiquités de l'Égypte* 59: 99–108, pls. I–IV.
- Little, Donald (1986), 'Data from the Haram documents on rugs in late 14th century Jerusalem', in eds. Robert Pinner and Walter Denny, *Carpets of the Mediterranean Countries, 1400–1600*. Oriental Carpet and Textile Studies. London: Hali: 83–93.
- Loffreda, Stanislao (1970), *Scavi di et-Tabgha. Relazione finale della campagna di scavi 25 Marzo–20 Giugno 1969*, SBF. Collectio minor 7. Jerusalem: Franciscan Press.
- (1982), 'Documentazione preliminare degli oggetti della campagna di scavi a Cafarnao', *LA* 32: 409–26, pls. 83–96.
- (1983), 'Nuovi contributi di Cafarnao per la ceramologia palestinese', *LA* 33: 347–72, pl. 45–46.
- Logar, Nusa (1991), 'Katalog der Keramikfunder aus dem Wasservertailer', *DM* 5: 147–168, pls. 50–53.
- (1992), 'Die Kleinfunde aus dem Westhofbereich der Grossen Basilika von Resafa', *DM* 6: 417–78, pls. 77–78.
- (1995), 'Die Keramik des mittelalterlichen Wohnkomplexes in Resafa', *DM* 8: 269–92.
- Lutfi, Huda (1985), *Al-Quds al-Mamlūkiyya: a history of Mamlūk Jerusalem based on the Haram Documents*, Islamkundliche Untersuchungen 113. Berlin: K. Schwarz.
- Luz Afonso, S. (1996), ed., *Chinese Export Porcelain from the Museum of Anastácio Gonçalves, Lisbon*. London: Philip Wilson.

- Lyons, Malcolm and David Jackson (1982), *Saladin: The Politics of Holy War*. Cambridge, Cambridge University Press.
- Mabry, Jonathon and Gaetano Palumbo (1988), 'The 1987 Wadi el-Yabis survey', *ADAJ* 32: 275–305.
- MacAdam, Henry (1994), 'Settlements and Settlement Patterns in Northern and Central Transjordan', in eds. Geoffrey King and Averil Cameron, *The Byzantine and Early Islamic Near East II. Land Use and Settlement Patterns*. Studies in Late Antiquity and Early Islam 1. Princeton NJ: Darwin Press: 49–93.
- MacAlister, Robert (1912), *The Excavation of Gezer 1902–1905 and 1907–1909*, 3 vols. London: Palestine Exploration Fund.
- MacAlister, Robert and John Duncan (1926), 'Excavations on the hill of Ophel, Jerusalem 1923–1925', *PEFA*: 196–200, pls. XVII–XXIII.
- MacDonald, Burton (1988), *The Wadi el Hasā Archaeological Survey, 1979–1983. West-central Jordan*. Waterloo: Wilfrid Laurier University Press, 1988.
- (1992), ed., *The Southern Ghors and Northeast Arabah Archaeological Survey*, Sheffield archaeological monographs 5. Dorchester: J.R. Collis.
- (1996), 'Survey and excavation: comparison of survey and excavation results from sites of the Wādī al-Ḥasa and the southern al-aghwār and north-east 'Arabah archaeological surveys', *ADAJ* 40: 323–37.
- MacDonald, Burton, Russell Adams and Piotr Bienkowski (2001) eds., *The Archaeology of Jordan*. Sheffield: Sheffield University Press.
- MacDonald, Burton, Larry Herr, Michael Neeley, Scott Quaintance and Andrew Bradshaw (2001), 'The Ṭafila-Buṣayra archaeological survey: phase 2 (2000)', *ADAJ* 45: 395–411.
- McGovern, P. (1983), 'Test soundings of archaeological and resistivity survey results and Rujm al-Henu', *ADAJ* 27: 105–42.
- McNicoll, Anthony, Philip Edwards, John Hanbury-Tenison, John Hennessy, Timothy Potts, Robert Smith, Alan Walmsley and Pamela Watson (1992), *Pella in Jordan 2: The second interim Report of the joint University of Sydney and College of Wooster Excavations at Pella, 1982–1985*. Sydney: Australian National Gallery.
- McPhillips, Stephen (2002), 'Twelfth-century pottery from the citadel of Damascus', *BEO* 53–54, *Supplément: études et travaux à la citadelle de Damas, 2000–2001: un premier bilan*: 139–56.
- McQuitty, Alison (1995), 'Watermills in Jordan: technology, typology, dating and development', *SHAJ* 5: 745–51.
- (2001), 'The Ottoman period', in MacDonald Adams and Bienkowski (2001): 561–93.
- McQuitty, Alison and Robin Falkner (1993), 'The Faris project: Preliminary report on the 1989, 1990 and 1991 seasons', *Levant* 25: 37–61.
- McQuitty, Alison, Madeleine Sarley-Pontin, M. Khoury, Michael Charles and Chantelle Hoppe (2000), 'Mamluk Khirbat Faris', *Aram* 9–10, 1997–98: 181–226.
- Magnani, Romolo (1981–82), *La ceramica Ferrarese tra Medioevo e Rinascimento*, 2 vols. Ferrara: Belriguardo.
- Magness, Jodi (2003), *The Archaeology of Early Islamic Settlement in Palestine*. Winona Lake Ind.: Eisenbrauns.
- Mahmoud, As'ad (1978), 'Terqa preliminary reports, no.5: die Industrie der islamischen Keramik aus der zweiten Season', *Syro-Mesopotamian Studies* (September): 95–114.
- Maier, F. and M.-L. Wartburg (1983), 'Excavations at Kouklia (Palaeopaphos). Twelfth preliminary report: seasons 1981 and 1982', *RDAC*: 300–14, pls. XLVIII–LII.
- Majali, R. and Mas'ad, A.R. (1987), 'Trade and trade routes in the Mamluk era (A.D. 1250–1516)', *SHAJ* 3: 311–16.
- Mandeville, Sir John (1953), *Mandeville's Travels. Texts and Translations*, ed. and trans. M. Letts, Hakluyt Society 2nd Series 101–102. London: Hakluyt Society.
- Ma'oz, Zeev and A. Killibrew (1985), 'Qasrein—1982/1984', *ESF* 4: 90–94.

- Maqrīzī, Taqī al-Dīn Aḥmad ibn ‘Alī (1837–45), *Histoire des sultans Mamlouks de l’Égypte* (excerpt from: *Kūṭāb al-sulūk li-ma‘rifat duwal al-mulūk*) 2 vols, trans. Marc Quatremère. Paris.
- (1934–72), *Kūṭāb al-sulūk li-ma‘rifat duwal al-mulūk*, 4 vols., ed. Muhammad Ziada and S. Ashour. Cairo: Matbaat Lajnat al-Talif wa’l-Tarjama wa’l-Nashr.
- Marino, Luigi, O. Dinelli, M. Guerra, G. Labanca, C. Nenci, F. Orlando and R. Sabelli (1990), ‘Crusader settlement in Petra’, *Fortress* 7: 3–13.
- Marx, E. (1992), ‘Are there pastoral nomads in the Middle East?’ in eds. Ofer Bar-Yosef and Anatolii Khazanov, *Pastoralism in the Levant. Archaeological and Anthropological Perspectives*. Monographs in World Archaeology 10. Madison Wi.: Prehistory Press.
- Marzouk, Mahmoud (1957), ‘Three signed specimens of Mamluk pottery from Alexandria’, *AO* 2: 497–501.
- Marzouk, Mahmoud (1959), ‘Egyptian sgraffiato ware excavated at Kom ed-Dikka in Alexandria’, *FUBEA* 13: 3–23, pls. I–XIV.
- Mas Latrie, Louis de (1883), ‘Les seigneurs du Crac de Montréal appelés d’abord seigneurs de la terre au delà du Jourdain’, *AV* 25: 475–94.
- Mason, Robert (1991), ‘Petrography of Islamic ceramics’, in eds. Andrew Middleton and Ian Freestone, *Recent Developments in Ceramic Petrology*. London: British Museum: 185–209.
- (1995a), ‘Criteria for the petrographic characterization of stonepaste ceramics’, *Archaeometry* 37.2: 307–21.
- (1995b), ‘Defining Syrian stonepaste ceramics: petrographic analysis of pottery from Ma‘arrat al-Nu‘mān’, in ed. James Allan, *Islamic Art in the Ashmolean Museum*, OSLA 10.2. Oxford: Oxford University Press: 1–18.
- (1997), ‘Medieval Syrian lustre-painted and associated wares: typology in a multidisciplinary study’, *Levant* 29: 169–200.
- (2004), *Shine like the Sun: Lustre-painted and associated Pottery from the Medieval Middle East*, Bibliotheca Iranica: Islamic Art and Architecture Series 12. Costa Mesa, Ca and Toronto: Mazda and Royal Ontario Museum.
- Mason, Robert and Edward Keall (1990), ‘Petrography of Islamic pottery from Fustāt’, *JARCE* 27: 165–84.
- Mason, Robert and Marcus Milwright (1998), ‘Petrography of Middle Islamic ceramics from Karak, Jordan’, *Levant* 30: 175–90.
- Mason, Robert and Michael Tite (1994), ‘The beginnings of Islamic stonepaste technology’, *Archaeometry* 36.1: 77–91.
- Maspero, Jean and Gaston Wiet (1919), *Matériaux pour servir à la géographie de l’Égypte*. Cairo: Institut Français d’Archéologie Orientale.
- Mas‘ūdī, ‘Alī ibn al-Ḥusayn (1861–77), *Les Prairies d’Or (Kūṭāb al-murūj al-dhahab wa ma‘ādin al-jawhar)*, vol 1, trans. Charles Barbier de Meynard and Abel Pavet de Courteille. Paris: Imprimerie Impériale.
- Mattingly, Gerald (1983), ‘The natural environment of central Moab’, *ADAJ* 27: 597–605.
- (1996), ‘The King’s Highway, the Desert Highway, and central Jordan’s Kerak plateau’, *Aram* 8: 89–99.
- Mayer, Hans (1972), ‘Studies in the History of Queen Melisende of Jerusalem’, *DOP* 26: 93–182.
- (1990), *Die Kreuzfahrtherrschaft Montréal (Šobak). Jordanien im 12. Jahrhundert*. Abhandlungen der Deutschen Palästinavereins 14. Wiesbaden: Otto Harrassowitz.
- Mayer, Leo (1933), *Saracenic heraldry*. Oxford: Clarendon Press.
- (1934), ‘A hoard of Mamluk coins’, *QDAP* 3: 167–71.
- Mazar, Amihai (1995), ‘Tel Bet She’an—1992/1993’, *ESI* 14: 59–60.
- Megaw, Arthur (1951a), ‘Three Medieval pit groups from Nicosia’, *RDAC* 1937–1939: 145–68, 225–26.

- (1951b), ‘Some Medieval acquisitions of the Cyprus Museum’, *RDAC* 1937–1939: 205–11.
- Mehmed Edib b. Mehmed Derviş (1825), ‘Itinéraire de Constantinople à la Mecque, extrait de l’ouvrage Turc intitulé: *Kiṭāb menassik el-hedj*, (*Kiṭāb menassik-i hacc-i şerif*) trans. M. Bianchi, *RVM* 2: 81–169.
- Meinecke-Berg, Viktoria (1983), ‘Keramik de italienishchen Renaissance im Nationalmuseum von Damaskus’, *DM* 1: 243–7, pl. 57.
- Meri, Josef (2002), *The Cult of Saints among Muslims and Jews in Medieval Syria*. Oxford: Oxford University Press.
- Mershen, Brigit (1985), ‘Recent handmade pottery from north Jordan’, *Berytus* 33: 75–87.
- Meyers, Eric, A. Thomas Kraabel and James Strange (1976), *Ancient Synagogue Excavations at Khirbet Shema^c, Upper Galilee, Israel, 1970–1972*, AASOR 42. Durham, North Carolina: ASOR.
- Meyers, Eric, James Strange and C. Meyers (1981), *Excavations at ancient Meiron, Upper Galilee, Israel 1971–72, 1974–75, 1977*, Meiron Archaeological Project 3. Durham, North Carolina: ASOR.
- Migeon, Gaston (1923), ‘Nouvelles découvertes sur la céramique de Damas’, *Revue de l’Art Ancien et Modern* 44: 383–86.
- Miller, J. Maxwell (1991), ed., *Archaeological survey of the Kerak plateau*. Atlanta: ASOR.
- Milwright, Marcus (1999), ‘Pottery in written sources of the Ayyubid-Mamluk period (c. 567–923/1171–1517)’, *BSOAS* 62: 504–18.
- (2000), ‘Pottery of Bilad al-Sham in the Ottoman period: A review of the published evidence’, *Levant* 32, pp. 195–214.
- (2001), ‘Gazetteer of archaeological sites in the Levant reporting pottery of the Middle Islamic period (ca. 1100–1600)’, *IA* 5: 3–39.
- (2003), ‘Modest luxuries: decorated lead-glazed pottery in the south of Bilad al-Sham (thirteenth and fourteenth centuries)’, *Muqarnas* 20: 85–111.
- (2004a), ‘Prologues and epilogues in Islamic ceramics: Clays, repairs and secondary use’, *MC* 25, 2001: 72–83.
- (2004b), ‘An inscribed pottery bowl of the Mamluk period’, *ADAJ* 48: 233–38.
- (2005), ‘Ceramics from the recent excavations near the eastern wall of Raḡīqa (Raḡqa), Syria’, *Levant* 37: 197–219.
- (2006a), ‘Central and southern Jordan in the Ayyubid period: archaeological and historical perspectives’, *JRAS*, ser. 3, 16.1: 1–27.
- (2006b), ‘Reynald of Châtillon and the Red Sea Expedition of 1182–1183’, in eds. Niall Christie and Maya Yazigi, *Noble Ideals and Bloody Realities: Warfare in the Middle Ages*. Leiden and Boston: Brill: 230–55.
- (in preparation), *Studies on the Ceramics Excavated in Raḡqa, Syria*.
- Mogabgab, Theophilus (1951), ‘Excavations in Famagusta’, *RDAC* 1937–39: 181–90.
- Mostafa, Mohamed (1949), ‘Two fragments of Egyptian lustre painted ceramics of the Mamlouk period’, *BIE* 5 ser. 31: 377–82, pls. I–X.
- Mouton, Jean-Michel and S. ‘Abd al-Malik, S. (1995), ‘La forteresse de l’île de Graye (Qal‘at Ayla) à l’époque de Saladin’, *An.Is.* 29: 75–90.
- Mouton, Jean-Michel, S. Abd al-Malik, O. Jaubert and C. Piaton (1996), ‘La route de Saladin (*ṭarīq Ṣadr wa Ayla*) au Sinai’, *An.Is.* 30: 41–70.
- Mumani, S.M. (1988), *al-Qīla‘ al-Islamiyya fi’l-Urdunn*. Amman.
- Muqaddasī, Shams al-Dīn Abū ‘Abd Allāh Muḥammad b. Aḥmad b. Abī Bakr al-Bannā al-Bashārī (1877), *Descriptio imperii moslemici (Kiṭāb aḥṣān al-taqāsim fi-ma‘rifat al-aqālim)*, ed. Michael de Goeje, BGA 3. Leiden: Brill.
- Musil, Alois (1907–1908), *Arabia Petraea*, 3 vols. Vienna.
- Nāṣir-i-Khusraw, Abū Mu‘īn Nāṣir b. Khusraw ‘Alawī (1881), *Sefer Nameh. Relation du voyage de Nassiri Khosrau en Syrie, en Palestine, en Arabie et en Perse pendant les années de l’hégire*

- 437–444 (1035–1042), trans. and ed. Charles Schefer. Paris: École des Langues Orientales Vivantes.
- Ne'eman, Yehuda (1990), *Archaeological Survey of Israel: Map of Ma'anit (54) 15–20*. Jerusalem: Israel Exploration Society.
- Neophytos of Cyprus (1938), 'Annals of Palestine, 1821–1841', trans. and ed. S. Spyridon, *JPOS* 18: 63–132.
- Nicholson, Helen (1997), trans. and ed., *Chronicle of the Third Crusade. A Translation of the Itinerarium Peregrinorum et Gesta Regis Ricardi*, Crusader Texts in Translation, Aldershot: Ashgate.
- Nicolle, David (1988), 'Ain al Ḥabīs. The cave de Sueth', *AM* 18: 113–40.
- Nimr, Ihsān (1975), *Ta'rikh jabal nābulus wa'l-balqā'*, vol. 1, 2nd ed., Nāblus.
- Northedge, Alastair (1988), 'Middle Sasanian to Islamic pottery and stone vessels', in eds. A. Northedge, A. Bamber and M. Roaf, *Excavations at Ana. Qal'a Island*. Iraq Archaeological Reports 1. Warminster: Aris and Phillips: 76–114.
- (1992), *Studies on Roman and Islamic Amman. The Excavations of C.-M. Bennet and other Investigations. Volume 1: History, Site and Architecture*. British Academy Monographs in Archaeology 3. Oxford: Oxford University Press.
- Nuwayrī, Aḥmad ibn 'Abd al-Wahhāb (1923–92), *Nihāyat al-arab fī funūn al-adab*, 31 vols. Cairo.
- Olami, Ya'acov (1981), *Archaeological Survey of Israel: Daliya Map (31) 15–22*. Jerusalem: Israel Exploration Society.
- Olavarrī, E. (1965), 'Sondages à 'Arō'er sur l'Arnon', *RB* 72: 77–94, pls. I–IV.
- Oliver of Paderborn (Oliverius) (1894), *Historia Damiatina et Epistolae in die Schriften des Kölner Domscholasticus, späteren Bischof von Paderborn und Kardinalbischof von Sabina, Oliverus*, BVL 202, ed. Hermann Hoogeweg. Tübingen.
- (1971), *The Capture of Damietta*, trans. John Gavigan in ed. E. Peters, *Christian Society and the Crusades. Sources in Translation*. Philadelphia: University of Pennsylvania Press: 49–139.
- Onn, Alexander and Yehuda Rapuano (1995), 'Jerusalem, Khirbet el-Burj', *ESI* 14: 88–90.
- Öney, Günül (1994), 'Pottery from the Samosata excavations, 1978–81', in ed. Robert Hillenbrand, *The Art of the Seljuqs in Iran and Anatolia*. Costa Mesa, Ca.: Mazda: 286–94.
- Ostrasz, A. (1997), 'The citadel of Amman. The conservation and restoration of the Ayyubid tower', *ADAJ* 41: 395–402.
- Pacc, James (1996), 'The cisterns of the al-Karak plateau', *ADAJ* 40: 369–74.
- Patrich, Joseph (1994), *Archaeological Survey of Judea and Samaria: Map of Deir Mar Saba (107/9)*. Jerusalem: Israel Exploration Society.
- Patrich, Joseph and Yoram Tsafrir (1985), 'A Byzantine church and agricultural installations at Khirbet Beit Loya', *Qadmoniot* 18.3–4/71–72: 106–12.
- Paul, A. (1955), 'Aidhab: a Medieval Red Sea port', *Sudan Notes and Records* 36: 63–68.
- Peacock, D. (1977), 'Ceramics in Roman and Medieval archaeology', in ed. D. Peacock, *Pottery and Early Commerce: Characterization and Trade in Roman and later Ceramics*. London, New York and San Francisco: Academic Press.
- Pecorella, Paolo (1983), 'The 1980–1982 campaigns at Tell Barri/Kahat, in the Jazirah', *AAAS* 33.1: 153–63.
- Pegolotti, Francesco Balducci (1936), *Practica della mercatura*. ed. Allan Evans. Cambridge, MA: Medieval Society of America.
- Peltenburg, Edgar, Stuart Campbell, Paul Croft, Dorothy Lunt, Mary Ann Murray, Mary Watts (1995), 'Jerablus-Tahtani, Syria, 1992–4: preliminary report', *Levant* 27: 1–28.
- Perrier, Jacques-Louis (1931), ed., *Le charroi de Nîmes: chanson de geste du XII^e siècle*. Paris: H. Champion.

- Petersen, Andrew (1991), 'Two forts on the medieval hajj route in Jordan', *ADAJ* 35: 347–60.
- (1995a), 'The fortification of the pilgrimage route during the first three centuries of Ottoman rule (1516–1757)', *SHAJ* 5: 299–305.
- (1995b), 'Survey in Galilee', *ESI* 14: 28–29.
- (2001), 'Ottoman hajj forts', in MacDonal, Adams and Bienkowski (2001): 685–91.
- Petrie, W. Flinders (1933), *Ancient Gaza III: Tell el-Ajjul*. London: British School of Archaeology in Egypt and Egyptian Research Accounts.
- Piccorillo, Michel (1994), 'La Chiesa del profeta Elia a Madaba. Nuove scoperte', *LA* 44: 381–404, pls. 1–12.
- Poggibonsi, Niccolo da (1945), *Voyage beyond the Seas (1346–1350)*, SBF 1, trans. Theophilus Bellorini and Eugene Hoade. Jerusalem: Franciscan Press.
- Poliak, Abraham (1977), *Feudalism in Egypt, Syria, Palestine and the Lebanon, 1250–1900*, Studies in Islamic History 13. London, 1939, repr. Philadelphia: Porcupine Press.
- Pool, C. (2000), 'Why a kiln? Firing technology in the Sierra de Los Tuxtlas, Veracruz (Mexico)', *Archaeometry* 42: 61–76.
- Poole, Julia (1995), *Italian Maiolica and Incised Slipware in the Fitzwilliam Museum, Cambridge*. Cambridge: Cambridge University Press.
- Popper, William (1955), *Egypt and Syria under the Circassian Sultans 1382–1468: Systematic Notes from Ibn Taghri Birdi's Chronicles of Egypt*. Berkeley and Los Angeles: University of California Press.
- Porter, Venetia and Oliver Watson (1987), '"Tell Minis" wares', in eds. James Allan and Caroline Roberts, *Syria and Iran: Three Studies in Medieval Ceramics*, OSIA 4. Oxford: Oxford University Press.
- Prag, Kay (2006), 'Defensive ditches in Ottoman fortifications in Bilād al-Shām', in Kennedy (2006): 295–306.
- Prawer, Joshua (1969–70), *Histoire du Royaume Latin de Jérusalem*. 2 vols. Paris: Éditions du Centre national de la Recherche scientifique.
- (1972), *The Latin Kingdom of Jerusalem*. Oxford: Clarendon Press.
- (1980), *Crusader Institutions*. Oxford: Clarendon Press.
- Pringle, Denys (1981), 'Medieval pottery of Palestine and Transjordan (A.D. 636–1500): an introduction, gazetteer and bibliography', *MC* 5: 45–60.
- (1982), 'Some more Proto-Maiolica from 'Athlith (Pilgrims' Castle) and a discussion of its distribution in the Levant', *Levant* 14: 104–17.
- (1984a), 'Thirteenth-century pottery from the monastery of St. Mary of Carmel', *Levant* 16: 91–111.
- (1984b), 'Italian pottery from late Mamluk Jerusalem: Some notes on the late and post-Medieval Italian tradewares in the Levant', *Atti XVII. Convegno internazionale della ceramica. Temi liberi* (Abisola): 37–44.
- (1985), 'Medieval pottery from Caesarea: the Crusader period', *Levant* 17: 171–202.
- (1986a), ed., *The Red Tower (al-Burj al-Ahmar): Settlement in the Plain of Sharon at the Time of the Crusaders and Mamluks, A.D. 1099–1516*, British School of Archaeology in Jerusalem Monograph Series 1. London: British School of Archaeology in Jerusalem.
- (1986b), 'Pottery as evidence for trade in the Crusader states', pp. 451–75 in eds. Gabriella Airaldi and Benjamin Kedar, *I Comuni italiani nel regno Crociato di Gerusalemme*, Atti de Colloquio, Collana Storica di Fonti e Studi. Genoa: CNR: 451–75.
- (1993–), *The Churches of the Crusader Kingdom of Jerusalem. A Corpus. Volume I: A–K (excluding Acre and Jerusalem)* (1993). *Volume II: L–Z (excluding Tyre)* (1998). Cambridge: Cambridge University Press.

- (1997a), *Secular Buildings in the Crusader Kingdom of Jerusalem*. Cambridge: Cambridge University Press.
- (1997b), 'Excavations in Acre, 1974: the pottery of the Crusader period from site D', *Atiqot 31: 'Akko (Acre) Excavation Reports and Historical Studies*: 137–55.
- (2001), 'Crusader castles in Jordan', in MacDonald, Adams and Bienkowski (2001): 677–84.
- Qalqashandī, Aḥmad b. 'Alī (1913–18), *Kitāb ṣubḥ al-a'shā*, 14 vols. Cairo.
- Qazwīnī, Zakariyyā' b. Muḥammad b. Maḥmūd (1967), *Kosmographie (Kitāb al-'ajā'ib al-makhlūqat wa-gharā'ib al-mawjūdāt)*, ed. Ferdinand Wüstenfeld. Göttingen, 1848–49, 2 vols. repr. in 1 vol., Wiesbaden: Martin Sändig.
- Raban, Avner (1982), *Archaeological Survey of Israel: Nahalal Map (28) 16–23*. Jerusalem: Israel Exploration Society.
- Raby, Julian (1995), 'Terra Lemnia and the potteries of the Golden Horn: an antique revival under Ottoman auspices', *BF* 21: 305–342.
- Rafeq, Abdul-Karim (2001), 'The socio-economic and political implications of the introduction of coffee into Syria. 16th–18th centuries', in Tuchscherer (2001): 129–42.
- Rapuono, Yehuda, Jeffrey Yas and Yehuda Dagan (1998), 'Khirbet en-Nabi Balus', *ESI* 17: 88–89.
- Raymond, André and Jean-Louis Paillet (1995), *Balis II. Histoire de Balis et fouilles des îlots I et II*. Damascus: Publications de l'Institut Français de Damas.
- Redford, Scott (1995), Medieval ceramics from Samsat, Turkey. *Archéologie Islamique* 5: 55–80.
- Reed, William (1972), 'The archaeological history of Elealeh in Moab', in eds. John Wevers and Donald Redford, *Studies on the Ancient Palestinian World presented to Professor F. V. Winnett on the Occasion of his Retirement, 1 July 1971*, Toronto Semitic Texts and Studies 2. Toronto: University of Toronto Press: 18–28.
- Regesta (1893), *Regesta regni Hierosolymitani (1097–1291)*, ed. Reinhold Rohricht. Innsbruck: Libreria Academica Wagneria (*Regesta Additamentum*. Innsbruck 1904).
- Reggi, Giovanni (1971), *La ceramica graffita in Emilia-Romagna del secolo XIV al secolo XIX*. Modena: Coopitip.
- Rey, Emmanuel (1883), *Les colonies Franques de Syrie aux XII^e et XIII^e siècles*. Paris: A. Picard.
- (1896), 'Les seigneurs de Montréal et de la terre d'Oultre Jourdain', *ROL* 4: 19–24.
- Rice, David (1952), Medieval Harran. Studies on its topography and monuments, I. *Anatolian Studies* 2: 36–83.
- Rice, Prudence (1987), *Pottery Analysis: A Sourcebook*. Chicago: Chicago University Press.
- Ricoldus de Montis Crucis (1864), *Peregrinatores medi aevi quatuor*, ed. Johann Laurent. Leipzig.
- Riis, Poul and Vagn Poulsen (1957), 'Les poteries', in *Hama, fouilles et recherches de la fondation Carlsberg 1931–1938, IV* 2. *Les verreries et poteries médiévales*, Nationalmuseets Skrifter. Storre Beretninger 3. Copenhagen: Nationalmuseet: 117–301.
- Riley Smith, Jonathon (1973), *The Feudal Nobility of the Kingdom of Jerusalem, 1174–1277*. London: Macmillan.
- Rogan, Eugene (1995), 'Reconstructing watermills in Late Ottoman Transjordan', *SHA* 5: 753–56.
- (1999), *Frontiers of the State in the Late Ottoman Empire: Transjordan, 1850–1921*. Cambridge Middle East Studies 12. Cambridge: Cambridge University Press.
- Rogers, J. Michael (1972), 'Apamea. The Medieval pottery. Preliminary report', in eds. Janine Balty and J. Balty, *Colloque Apamée de Syrie, bilan de recherches archéologiques, 1969–1971*. Brussels: Centre belge de recherches archéologiques à Apamée de Syrie: 253–70.

- (1984), 'Mediaeval pottery at Apamea in the 1976 and 1977 seasons', in ed. Janine Balty, *Apamée de Syrie, bilan des recherches archéologiques 1973–1979: aspects de l'architecture domestiques d'Apamée*. Brussels: Centre belge de recherches archéologiques à Apamée de Syrie: 261–87.
- Roll, Israel and Ayalon, Etan (1982), 'Apollonia/Arsur- a coastal town on the southern Sharon plain', *Qadmoniot* 15.1 (57): 16–22.
- Ronen, Avraham and Ya'acov Olami (1978), *Archaeological Survey of Israel 1: 'Aitit Map*. Jerusalem: Israel Exploration Society.
- Ronen, Avraham and Ya'acov Olami (1983), *Archaeological Survey of Israel: Map of Haifa-East (23) 15–24*. Jerusalem: Israel Exploration Society.
- Rothenberg, Benno (1999), 'Archaeo-metallurgical researches in the southern Arabah. Part 2: Egyptian New Kingdom (Ramesside) to early Islam', *PEQ*, July-December: 149–75.
- Saccardo, F. (1993), 'La ceramica a Venezia nel XVII secolo', in ed. Sauro Gelichi, *Alla fine della graffita ceramiche a centri di produzione nell'Italia settentrionale tra XVI e XVII secolo*. Florence: All'Insegna del Giglio: 139–66.
- Safar, Fuad (1945), *Wāsiṭ. The Sixth Season's Excavations*. Cairo: Institut Français d'Archéologie Orientale.
- Salamé-Sarkis, Ḥassān (1980), *Contribution à l'histoire de Tripoli et de sa région a l'époque des croisades: problèmes d'histoire, d'architecture et de céramique*, Bibliothèque Archéologie et Historique 106. Paris: Institut Français d'Archéologie du Proche-Orient.
- Saller, Sylvester (1946), *Discoveries at St. John's, 'Ein Karim, 1941–1942*, SBF 3. Jerusalem: Franciscan Press.
- (1957), *Excavations at Bethany (1949–1953)*, SBF 12. Jerusalem: Franciscan Press.
- Sandoli, Sabino de (1978–80), ed., *Itinera Hierosolymitana Crucesignatorum*, 2 vols., SBF 24. Jerusalem: Franciscan Printing Press.
- Sanudo, Marino (1972), *Liber secretorum fidelium crucis super Terrae Sanctae recuperatione et conservatione*, in ed. J. Bongars, *Gesta Dei per francos sive orientalium expeditionum et regni francorum Hierosolymitani historia*, vol. 2, Hanover, Jean Aubrii, 1611 (repr. with annotations by Joshua Prawer. Jerusalem: Massada Press, 1972).
- Sari, Ṣāliḥ (1986a), 'A Mamluk hoard from Kerak', *NIAATU* 1986/2: 8.
- (1986b), *A Critical Analysis of a Mamluk Hoard from Karak*, PhD Dissertation. University of Michigan.
- (1992a), 'Dohaleh, a new site in northern Jordan', *LA* 42: 259–77.
- (1992b), 'The Results of the second season of excavations at Dohaleh/Nu'aymah: a preliminary report', *ADAJ* 36: 398–373 (Arabic section).
- (1995), 'Important archaeological discoveries at Sa'ad/al Mafraq', *NIAATU* 17: 15–17.
- Sarre, Friedrich (1925), *Keramik und andere Kleinfunde der islamischen Zeit von Baalbek*. Berlin and Leipzig: W. de Gruyter.
- Sarre, Friedrich and Ernst Herzfeld (1911–20), *Archäologische Reise im Euphrat-und Tigris Gebiet*, 4 vols. Berlin: D. Reimer.
- Sauer, James (1973), *Heshbon Pottery 1971: A Preliminary Report on the Pottery from the 1971 Excavations at Tell Heshban*. Michigan: Andrews University Press.
- (1975), 'Review of A. D. Tushingham, *The Excavation of Dibon (Dhibān) in Moab*', *ADAJ* 20: 103–109.
- (1976), 'Pottery techniques at Tell Deir 'Alla. Review of H. J. Franken and J. Kalsbeek (1975)', *BASOR* 224: 91–94.
- (1982), 'The pottery of Jordan in the Early Islamic periods', *SHAJ* 1: 329–37.
- (1994), 'Pottery at Hesban and its relationships to the history of Jordan: an interim Hesban pottery report, 1993', in eds. David Merling and Lawrence Geraty, *Hesban after 25 Years*. Berrien Springs: Andrews University Press: 225–82.
- Sauvaget, Jean (1932), *Poteries Syro-Mesopotamiennes du XIV^e siècle*. Paris: Ernest Leroux.

- (1941), *La poste aux chevaux dans l'empire des Mamelouks*. Paris: Ernest Leroux.
- (1948), 'Tessons de Rakka', *AI* 13–14: 31–45.
- Scanlon, George (1971), 'The Fuṣṭāṭ mounds: a shard count, 1968', *Archaeology* 24: 220–33.
- (1980), 'Some Mamluk ceramic shapes from Fustat: "sgraff" and "slip,"' *Islamic Archaeological Studies* 2: 59–141.
- (1984), 'Mamluk pottery: more evidence from Fustat', *Muqarnas* 2: 115–26.
- Scerrato, Umberto and G. Vassallo Ventrone (1982), 'La ceramica islamica', in *Tell Barri/Kahat. Relazione preliminare sulle campagne 1980 e 1981 a Tell Barri/Kahat nel bacino del Habur*. Rome: Consiglio Nazionale della Ricerca: 77–88.
- Schaefer, Jerome (1989), 'Archaeological remains from the Medieval Islamic occupation of the northwest Negev desert', *BASOR* 274: 33–60.
- Schick, Robert (1994), 'The Settlement patterns of Southern Jordan: the nature of the evidence', in eds. Geoffrey King and Averil Cameron, *The Byzantine and Early Islamic Near East II. Land Use and Settlement Patterns*. Studies in Late Antiquity and Early Islam 1. Princeton NJ: Darwin Press: 133–54.
- (1995), *The Christian Communities of Palestine from Byzantine to Islamic Rule. A Historical and Archaeological Study*. Studies in Late Antiquity and Early Islam 2. Princeton NJ: Darwin Press 1995.
- Schlumberger, Gustave (1898), *Renaud de Châtillon, prince d'Antioche, seigneur de la terre d'Outre-Jourdain*. Paris: Librairie Plon.
- Schumacher, Gottlieb (1908), *Tell el-Mutesellim. 1 Band. Fundbericht*. Leipzig: R. Haupt.
- Scott, Rosemary (1995), 'Southern Chinese provincial kilns: their importance and possible influence on South East Asian ceramics', in eds. Rosemary Scott and John Guy, *South East Asia and China: Art, Interaction and Commerce*, CAAA 17: 187–204.
- Seetzen, Ulrich (1854–59), *Reisen durch Syrien, Palästina, Phoenicien, die Transjordan-Länder, Arabia Petraea und Unter-Aegypten*, 4 vols. Berlin.
- Seligman, Jon (1996), 'Bet She'an, the citadel', *ESI* 15: 43–47.
- Sellin, Ernst and Carl Watzinger (1913), *Jericho. Die Ergebnisse der Ausgrabungen*, Wissenschaftliche Veröffentlichung der deutschen Orient-Gesellschaft 22. Leipzig: Hinrichs.
- Serjeant, Robert (1972), *Islamic Textiles: Materials for a History up to the Mongol Conquest*. Beirut: Librairie du Liban.
- Setton, Kenneth (1955–85), ed., *A History of the Crusades*, 5 vols. Pennsylvania and Madison: University of Wisconsin Press.
- Shaked, Idan (1997), 'Margoliot fortress', *ESI* 16: 17–18.
- Shaw, Stanford (1962), *The Financial and Administrative Organization and Development of Ottoman Egypt, 1517–1798*. Princeton NJ: Princeton University Press.
- Shayzarī, 'Abd al-Raḥmān b. Nāṣir (1948), *Nihāyat al-rutba fī ṭalab al-ḥisba*, ed. al-Sayyid al-Bāz al-'Arīnī. Cairo.
- Shemouli, Oren (1996), 'Tel Yehud', *ESI* 15: 64–65.
- Shujā'ī, Shams al-Dīn (1977), *Die Chronik As-Sugā'īs (Ta'rikh al-malik al-nāṣir muḥammad b. qalāwūn al-ṣāliḥi wa-awladīhi)*, vol. 1 (Arabic text), Islamkundliche Untersuchungen 15, ed. Barbara Schäfer. Freiburg im Breisgau: K. Schwarz.
- Silberman, Neil (1982), *Digging for God and Country*. New York: Knopf.
- (1989), *Between Past and Present: Archaeology, Ideology, and Nationalism in the Modern Middle East*. New York: H. Holt.
- Sillar, Bill and Tite, Michael (2000), 'The Challenge of "technological choices" for materials science approaches in archaeology', *Archaeometry* 42: 2–20.
- Simpson, St. John (2002), 'Ottoman pipes from Zir'in (Tell Jezreel)', *Levant* 34: 159–72.
- Smail, Raymond (1956), *Crusading Warfare (1097–1193)*, Cambridge Studies in Medieval Life and Thought new ser. 3. Cambridge: Cambridge University Press.
- Small, David (1995), ed., *Methods in the Mediterranean: Historical and Archaeological Views*

- on *Texts and Archaeology*. Mnemosyne: Bibliotheca Classica Batava. Leiden and New York: Brill, 1995.
- Smith, Robert (1973), *Pella of the Decapolis, Volume 1. The 1967 Season of the College of Wooster Expedition to Pella*. Wooster, Ohio: College of Wooster.
- Smith, Robert and Leslie Day (1989), *Pella of the Decapolis. Volume 2. Final Report on the College of Wooster Excavations in Area IX, the Civic Complex, 1979–1985*. Wooster, Ohio: College of Wooster.
- Stern, Edna (1997), ‘The pottery of the Crusader and Ottoman periods’, *Atiqot 31: Akko (Acre) Excavation Reports and Historical Studies*: 35–70.
- (1998), ‘Horvat Manot’, *ESI* 17: 10–11.
- Stern, Ephraim (1994), *Dor: Ruler of the Seas. Twelve Years of Excavations at the Israelite-Phoenician Harbor Town on the Carmel Coast*. Jerusalem: Israel Exploration Society.
- Stern, Samuel (1965), ‘Two Ayyubid decrees from Sinai’, in ed. Samuel Stern, *Documents from Islamic Chanceries. First series*. Oriental studies 3. Oxford: Bruno Cassirer: 9–38.
- Suliman, Emsaytef and Alison Betts (1981), ‘Rescue excavations at Tell Sahl es-Sarab’, *ADAġ* 25: 227–34.
- Suriano, Francesco (1949), *Treatise on the Holy Land*, trans. Theophilus Bellorini and Eugene Hoade with notes by Bellarmino Bagatti, SBF 8. Jerusalem: Franciscan Press.
- Suyūfī, Muḥammad b. Aḥmad (1982–84), *Ithāf al-akhīṣa bi-fadā’il al-maṣjīd al-aqṣā*, 2 vols., ed. Aḥmad Ramaḍān Aḥmad. Cairo: al-Hayah al-Misriya al-Amma li’l-Kitab.
- Syon, Danny (1995), ‘Nuris’, *ESI* 14: 73.
- Tabbaa, Yasser (2006), ‘Defending Ayyubid Aleppo: the fortifications of al-Zāhīr Ghāzī’, in Kennedy (2006): 176–83.
- Tabulae* (1869), *Tabulae ordinis Theutonici*, ed. Ernst Strehlke. Berlin: Weidmann.
- Tatcher, Ayalet and Danny Syon (1996), ‘Khirbet esh-Shubeika’, *ESI* 15: 21–22.
- Thalman, Jean-Paul (1978), ‘Tell ‘Arqa (Liban nord), campagnes I–III (1972–1974). Chantier I: rapport préliminaire’, *Syria* 55: 1–152.
- Theodorici of Würzburg (1976), *Theodorici. Libellus de locis sanctis*, ed. Marie Luise and W. Bulst, Editiones Heidelbergenses 18. Heidelberg: Carl Winter.
- Thietmar, bishop of Merseburg (1851), *Voyage fait en Terre Sainte par Thetmar en 1217 et par Burchard de Strasbourg, en 1175, 1189 ou 1225*, ed. le Baron Jules de Saint-Génois in *MARB* 26.
- Tholbecq, Laurent (2000), ‘Une installation d’époque médiévale dans la sanctuaire de Zeus de Jérash (Jordanie): la céramique’, *Aram* 9–10, 1997–98: 153–79.
- Tibble, Stephen (1989), *Monarchy and Lordships in the Latin Kingdom of Jerusalem: 1099–1291*. Oxford: Oxford University Press.
- Tite, Michael, Ian Freestone, Robert Mason, J. Molera, M. Vendrell-Saz and N. Wood (1998), ‘Lead glazes in Antiquity—methods of production and reasons for use’, *Archaeometry* 40.2: 241–60.
- Tobler, Titus (1879–85), ed., *Itinera Hierosolymitana et descriptiones Terrae Sanctae*. Publications de la Société de l’Orient Latin. Série Géographique I–II. Geneva: J.C. Fick.
- (1974), ed., *Descriptiones Terrae Sanctae ex saeculo VIII, IX, XII, XV*. Leipzig: J.C. Hinrichs 1874 repr. Hildesheim and New York: Georg Olms.
- Tomber, Roberta (1993), ‘Quantitative approaches to the investigation of long-distance exchange’, *JRA* 6: 142–66.
- Tonghini, Cristina (1995), ‘A new Islamic pottery phase in Syria: Tell Shahin’, *Levant* 28: 197–207.
- Tonghini, Cristina (1998), *Qal’at Ja’bar Pottery: a Study of a Syrian fortified Site of the late 11th–14th Centuries*, Council for British Research in the Levant Monographs 11. Oxford: Oxford University Press.
- Tonghini, Cristina and Grube, Ernst (1989), ‘Towards a history of Syrian Islamic pottery before 1500’, *IA* 3: 59–93.

- Tonghini, Cristina, E. Donato, N. Montevocchi and M. Nucciotti (2003), 'The evolution of masonry technique in Islamic military architecture: the evidence from Shayzar', *Levant* 35: 179–212.
- Toombs, Lawrence (1985), *Tell el-Hesi: Modern Military Trenching and Muslim Cemetery in Field I, Strata I–II. The Joint Archaeological Expedition to Tell el-Hesi, Vol. 2*, ed. Kevin O'Connell. Waterloo, Ontario: Wilfrid Laurier University Press.
- Toueir, Kassem (1973), 'Céramiques Mameloukes à Damas', *BEO* 26: 209–17.
- Tristram, Henry (1874), *The Land of Moab: Travels and Discoveries on the East Side of the Dead Sea and the Jordan*. London: John Murray.
- Tuchscherer, Michel (2001), ed., *Le commerce du café avant l'ère des plantations coloniales: espaces, réseaux, sociétés (XV^e–XIX^e siècle)*. Cahiers des Annales Islamologiques 20. Cairo: Institut Français d'Archéologie Orientale.
- Turquety-Pariset, Françoise (1982), 'Fouilles de la municipalité de Beyrouth (1977): les objets', *Syria* 59: 27–76.
- Tushingham, A. Douglas (1972), *The Excavation at Dibon (Dhibān) in Moab. The Third Campaign*, AASOR 40. Cambridge MA: ASOR.
- (1985), *Excavations in Jerusalem, 1961–1967, vol. 1*. Toronto: Royal Ontario Museum.
- Tzaferis, Vassilios (1975), 'The archaeological excavation at Shepherds' Field', *LA* 25: 5–52, pls. 1–25.
- Tzaferis, Vassilios and T. Muttat (187–88), 'Banias—1986', *ESI* 6: 2–3.
- Ulaymī, Muḥjir al-Dīn 'Abd al-Raḥmān ibn Muḥammad al-Ḥanbalī (1876), *Histoire de Jérusalem et d'Hébron depuis Abraham jusqu'à la fin du XV^e siècle de J.-C.* (excerpts from *Kūtib al-ins al-jalīl bi-ta'rīkh al-quds wa'l-khalīl*), trans. Henri Sauvaire. Paris.
- Umarī, Ibn Faḍl Allah Shihāb al-Dīn Aḥmad b. Yaḥyā (1985a), *Masālik al-abṣār fī mamālik al-amṣār*, (excerpt of) ed. Ayman Sayyid, Textes Arabes et études Islamiques 23. Cairo: Institut Français d'archéologie orientale.
- (1985b), *Masālik al-abṣār fī mamālik al-amṣār: qabā'il al-'arab fī'l-qarnayn al-sābi' wa'l-thāmin al-ḥijriyyayn*, (excerpt of *Masālik al-abṣār*) ed. Dorothea Krawulsky. Beirut: al-Markaz al-Islāmī li'l-Buhūth.
- (1988), *al-Ta'rif bi'l-muṣṭalah al-sharīf*, ed. Muḥammad Ḥusayn Shams al-Dīn. Beirut: Dar al-Kutub al-Ilmiyah.
- Ush, Abu al-Faraj (1960–63), 'Fakhkhār ghayr maṭlī-I', *AAAS* 10 (1960): 135–84 (Arabic section). Two more installments in *AAAS* 11–12 (1961–62): 35–60 (Arabic section); *AAAS* 13 (1963): 3–52 (Arabic section).
- Uways, Imān (1985), 'A Roman-Byzantine tomb at Jerash', *ADAḥ* 29: 31–41, pls. I–VIII (Arabic section).
- Valenstein, Suzanne (1989), *A Handbook of Chinese Ceramics*, revised and enlarged ed. New York: Metropolitan Museum of Art.
- Vannini, Guido and Andrea Vanni Desideri (1995), 'Archaeological research on Medieval Petra: A preliminary report', *ADAḥ* 39: 509–40.
- Vannini, Guido and Cristina Tonghini (1997), 'Medieval Petra: The stratigraphic evidence from recent archaeological excavations at Wu'ayra', *SHAḥ* 6: 371–84.
- Volney, Constantin-François (1959), *Voyage en Egypte et en Syrie*, Monde d'Outre-mer, passé et présent. Deuxième série. Documents 2, ed. with intro. Jean Gaulmier. Paris: Mouton.
- Waagc, Friedrich (1948), *Antioch-on-the-Orontes IV. Part One: Ceramic and Islamic Coins*. Princeton NJ: Princeton University Press.
- Walker, Bethany (2001), 'Mamluk administration of Transjordan: Recent findings from Tall Hisban', *Al-'Usur al-Wusta* 13.2: 30–33.
- (2003), 'Mamluk investment in southern Bilād al-Shām in the eighth/fourteenth century: the case of Ḥisbān', *JNES* 62.4: 241–61.
- (2004a), 'Ceramic evidence for political transformations in early Mamluk Egypt', *MSR* 8.2: 1–114.

- (2004b), ‘Mamluk investment in Transjordan: A “boom and bust” economy’, *MSR* 8.2: 119–47.
- (2005), ‘The Northern Jordan survey 2003—Agriculture in Late Islamic Malka and Hubras villages’, *BASOR* 339: 67–111.
- Walker, Bethany and Øystein LaBianca (2003), ‘The Islamic *quṣūr* of Tall Ḥisbān: Preliminary report on the 1998 and 2001 seasons’, *ADAĵ* 47: 443–71.
- Wallis, Henry (1891), *The Godman Collection. Persian Ceramic Art in the Collection of Mr. F. DuCane Godman, F. R. S., the Thirteenth-Century Lustred Vases*. London.
- Walmsley, Alan (2000), ‘Settled life in Mamlūk Jordan: Views of the Jordan valley from Fahl (Pella)’, *Aram* 9–10, 1997–98: 129–43.
- (2001), ‘Fatimid, Ayyubid and Mamluk Jordan and the Crusader interlude’, in MacDonald, Adams and Bienkowski (2001): 515–59.
- Walmsley, Alan, M. Choat and N. Ricklefs (1998), ‘Gharandal in Jibāl: First season report’, *ADAĵ* 42: 433–41.
- Walmsley, Alan, K. Karsgaard and Anthony Grey (1999), ‘Town and village: Site transformations in southern Jordan (the Gharandal Archaeological Project, second report), *ADAĵ* 43: 459–78.
- Walmsley, Alan and Anthony Grey (2001), ‘An interim report on the pottery from Gharandal (Arindela), Jordan’, *Levant* 33: 139–64.
- Walter Rast and R. Thomas Schaub (1974), ‘Survey of the southeastern plain of the Dead Sea’, *ADAĵ* 19: 5–54.
- Wei, Zhu (2005), ‘Blue and white ewer decorated with chrysanthemum scroll pattern of the Hongwu period’, *OA* 45.2: 9–17.
- Whitcomb, Donald (1987), ‘Excavations at ‘Aqaba: first preliminary report’, *ADAĵ* 31: 247–66.
- (1988a), ‘A Fatimid residence at ‘Aqaba, Jordan’, *ADAĵ* 32: 207–24.
- (1988b), *Aqaba: Port of Palestine on the China Sea*. Amman: al-Kutba.
- (1988c), ‘Khirbet al-Mafjar reconsidered: The ceramic evidence’, *BASOR* 271: 51–67.
- (1990–91), ‘Glazed ceramics of the Abbasid period from the Aqaba excavations’, *TCS* 55: 43–66.
- (1992), ‘The Islamic period as seen from selected sites’, in MacDonald (1992): 111–25.
- Whitcomb, Donald and Janet Johnson (1979), *Quseir al-Qadim 1978: Preliminary Report, ARCE Preliminary and Final Reports of Archaeological Excavations in Egypt from Prehistoric to Medieval Times 1*. Cairo: American Research Center in Egypt.
- (1982), *Quseir al-Qadim 1980: Preliminary Report, ARCE Preliminary and Final Reports of Archaeological Excavations in Egypt from Prehistoric to Medieval Times 7*. Cairo: American Research Center in Egypt.
- Whitehouse, David (1966), ‘Chinese porcelain from Lucera castle’, *Faenza* 52: 90–93.
- Wightman, G. (1989), *The Damascus Gate, Jerusalem: Excavations by C.-M. Bennett and J.B. Henessy at the Damascus Gate, Jerusalem, 1964–66*, BAR International series 519. Oxford: British Archaeological Reports.
- Wilkinson, Charles (1973), *Nishapur: Pottery of the Early Islamic Period*. New York: Metropolitan Museum of Art.
- Will, Ernest, Jean-Marie Dentzer and Jean-Paul Thalmann (1973), ‘La première campagne des fouilles a Tell ‘Arqa (Liban nord)’, *BMB* 26: 61–79, pls. I–XXIV.
- William of Tyre (Willelmi Tyrensis) (1976), *A History of Deeds done beyond the Sea*, 2 vols., Records of Civilization. Sources and Studies, trans. E. Babcock and A. Krey. New York: Columbia University Press (1943 repr. 1976).
- (1986), *Chronicon*. Corpus Christianorum. Continuatio Mediaevali LXIII, LXIII, ed. R. Huygens with notes by Hans Mayer and Gerhard Rösch. Turnholti: Brepolis Editores Pontificii.
- Wilkinson, John, William Ryan and Joyce Hill (1988), eds, *Jerusalem Pilgrimage*,

- 1099–1185. Works issued by the Hakluyt Society, New Series No. 167. London: Hakluyt Society.
- William of Rubruck (1990), *The Mission of Friar William of Rubruck. His Journey to the Court of the Great Khan Mongke, 1253–1255*, trans. Peter Jackson and annotated Peter Jackson and David Morgan. Hakluyt Soc. Second series 173. London: Hakluyt Society.
- Winnett, Fred and William Reed (1964), *The Excavations at Dibon (Dhībān) in Moab*, AASOR 36–37. New Haven: ASOR.
- Wood, J. (1993), ‘The fortifications of Amman citadel, Jordan’, *Fortress* 16: 3–15.
- Worrell, William (1934), ‘On certain Arabic terms for “rug,”’ *AI* 1: 219–22.
- (1935), ‘More about Arabic terms for “rug,”’ *AI* 2: 65–68.
- Worschech, Udo (1984), ‘Archäologischer Survey der nördlichen Arḍ el-Kerak 1984’, *LA* 34: 445–47.
- (1985), ‘Preliminary report on the third survey season in north-west Arḍ al-Kerak, 1985’, *ADAḡ* 29: 161–73.
- Wright, Thomas (1948), ed. and trans., *Early Travels in Palestine*, Bohn’s Antiquarian Library. London: Henry J. Bohn.
- Xinyuan, L. (1993), ‘Yuan dynasty official wares from Jingdezhen’, in ed. Rosemary Scott, *The Porcelains of Jingdezhen*, *CAA* 16: 33–46.
- Ya‘qūbī, Aḥmad b. Abī Ya‘qūb (1892), *Kitāb al-buldān*, (incorporated in one vol. with Ibn Rustah) ed. Michael de Goeje, BGA 7. Leiden: Brill.
- Yāqūt, ibn ‘Abd Allāh al-Ḥamawī (1866–70), *Ḥaṣṣat al-ḡarab* (*Kitāb muḡam al-buldān*), 6 vols, ed. Ferdinand Wüstenfeld. Leipzig.
- Yeo, S. and Jean Martin (1978), *Chinese Blue and White Ceramics*. Singapore: Arts Orientalis.
- Zayadine, Fawzi (1971), ‘Deux inscriptions Grecques de Rabbat Moab (Acropolis)’, *ADAḡ* 16: 71–76.
- (1982), ‘Recent excavations at Petra (1979–1981)’, *ADAḡ* 26: 365–93.
- (1985), ‘Caravan routes between Egypt and Nabataea and the voyage of sultan Baibars to Petra in 1276 A.D.’, *SHAḡ* 2: 159–74.
- Ziadeh, Ghada (1995), ‘Ottoman ceramics from Ti‘innik, Palestine’, *Levant* 27: 209–45.
- Ziadeh, Nicola (1953), *Urban Life in Syria under the Early Mamluks*. Beirut: American University in Beirut Press.
- Zori, Nehemia (1966), ‘The house of Kyrios Leontis at Beth Shean’, *IEḡ* 16: 123–34, pls. 9–13.

INDEX

Personal Names

- Aaron, see Nabī Hārūn
 ‘Abd Allāh Bāsha al-Nimr, 99
 ‘Abd al-Laṭīf al-Baghdādī, 36
 Abū al-Faraj al-Qulī al-Karakī, 16 n.40
 Abdulfattah, Kamal, 95
 Abū al-Fidā’, Imad al-Dīn Ismā‘īl b. ‘Alī,
 83, 88, 107, 110, 114
 Abū Maṣṣūr Aybak, 76
 Abū Shāma, 64 n.50
 Abū Sulaymān al-Dirānī, 77, 93 n.208
 ‘Ādil, sultan Sayf al-Dīn al-Malik, 35, 38,
 39, 69, 71, 73, 77, 260
 Aḥmad b. ‘Isā al-Ḥākīm, 88
 ‘Alā’ al-Dīn Qubruṣ al-Manṣūrī, 89
 Albert of Aix, 66
 Albright, William, 123
 ‘Alī al-Harawī, 77
 ‘Alī b. Sakhtkamān, 69 n.84
 Amaury I, king of Jerusalem, 31
 Ambroise, 39
 Amīn al-Dīn, 42
 Anūk, son of Nāṣir Muḥammad ibn
 Qalāwūn, 44
 Āqbirdī al-Minqār, 47
 Aqṣunqur, *nā‘ib* of Gaza, 114
 Arculf, 117
 Asad al-Iskandarānī, 238
 Aṣfahid al-Turkumānī, 54 n.2
Assises of Jerusalem, 54, 56, 58
 ‘Aynī, Badr al-Dīn Maḥmūd ibn
 Muḥammad, 74
 ‘Azīz b. al-Mughūth ‘Umar, 78 n.127
- Badr al-Dīn Ṣawābī, 40, 41
 Badr al-Dīn Muḥammad al-Atabakī, 71
 n.85
 Bahādur al-Badrī, 92
 Bakhit, Muhammad Adnan, 50
 Balducci Pegolotti, Francesco, 121,
 160
 Baldwin I, king of Jerusalem, 25, 26, 29,
 54 n.2, 57, 60, 64, 67, 114
 Baldwin III, king of Jerusalem, 30
 Baldwin IV, king of Jerusalem, 31, 37
 Baldwin, son of Ulrich, 65 n.53
 Bāligh b. Yūsuf b. Ṭayyi’, 45, 83, 84
- Barqūq, sultan al-Zāhir Sayf al-Dīn, 45,
 46, 84, 91, 110, 264, 266
 Bauden, Frédéric, 83, 84
 Baybars, sultan al-Zāhir Rukn al-Dīn, 40,
 41, 42, 43, 44, 63, 65 n.56, 71, 72, 78,
 80 n.136, 82, 84, 85, 87, 89, 90, 129,
 174, 261, 262, 263, 264
 Baybars al-Manṣūrī, 84, 129
 Berke Khān, sultan Sa‘īd Nāṣir al-Dīn, 43
 Brown, Robin, 73, 86, 111, 113, 140,
 144, 151, 156, 184, 245, 254
 Burchard of Mount Zion, 48 n.110, 123
 Burckhardt, John Lewis, 8, 9, 51 n.126,
 105, 111, 115, 121
- Carswell, John, 234
- Deschamps, Paul, 60, 67
 Dimashqī, Muḥammad b. Abī Ṭālib, 66
 n.65, 80, 89, 91, 113, 115
 Diocletian, 75
 Dhahabī, Ibrāhīm b. Muḥammad, 36
 Doughty, Charles, 8, 9
- Ernoul, 34
 Ettinghausen, Richard, 179
 Evliya Çelebi, 95, 116
- Fabri, Felix, 118, 119, 120
 Faraj, sultan Nāṣir al-Dīn, 46, 266
 Farrūkh Shāh, 34
 Faucherre, Nicholas, 61
 Franken, Hendricus, 189
 Fretellus, 119
 Fulcher of Chartres, 25, 115, 122
 Fulk of Anjou, king of Jerusalem, 28, 29
- Garin de Hobelet, 58 n.18
 Gayraud, Roland-Pierre, 236
 Goumans, Johan, 56 n.10
 Gucci, Giorgio, 117
 Guericus, bishop of Oultrejourdain,
 30, 59
- Hafūkīm, 62
 Hājji II, sultan al-Ṣāliḥ Ṣalāḥ al-Dīn, 45

- Hamilton, Bernard, 31, 32
 Hayes, John, 182
 Hetum, king of Armenia, 68
 Hugo, viscount of Montréal, 27 n.16, 54
 Hülegü, 41
 Humphrey, of Toron, 37 n.64
 Ḥusām al-Dīn Bākhil, 69 n.84
 Ḥusām al-Dīn Ḥasan al-Kujkūnī, 46
 Ḥusām al-Dīn Lu'lu', 35
 Hütteroth, Wolf-Dieter, 95
- Ibelin, Jean de, 54 n.4
 Ibn 'Abd al-Zāhir, Muḥyī al-Dīn 'Abd Allāh, 71, 84
 Ibn al-Athīr, 'Izz al-Dīn 'Alī b. Muḥammad, 63, 64, 66 n.65
 Ibn Baṭṭūṭa, Muḥammad b. 'Abd Allāh, 1, 111
 Ibn al-Bayṭār, 'Abd Allāh ibn Aḥmad, 119
 Ibn al-Dawādārī, Abū Bakr b. 'Abd Allāh b. Aybak, 62
 Ibn Duqmāq, Muḥammad b. Aḥmad, 16
 Ibn Iyās, Abū al-Barakat Muḥammad b. Aḥmad al-Hanafī, 111
 Ibn al-Jazarī, Shams al-Dīn Muḥammad b. Ibrāhīm, 88
 Ibn Jubayr, Muḥammad ibn Aḥmad, 32, 129
 Ibn Khāṭir, chief of Banū 'Uqba, 46
 Ibn Khurdādhbih, Abū al-Qāsim 'Ubayd Allāh, 123
 Ibn Sa'ūd, shaykh of Mecca, 51 n.126
 Ibn Shaddād, 'Izz al-Dīn Muḥammad b. 'Alī, 62, 114
 Ibn Ṭūlūn, Shams al-Dīn Muḥammad b. 'Alī, 104
 Ibn al-Ukhuwwa, Diyā' al-Dīn Muḥammad, 106
 Ibrāhīm b. al-Nāṣir Muḥammad ibn Qalāwūn, 44
 Ibrāhīm Pasha, 51, 75
 Idrīsī, Abū 'Abd Allāh, Muḥammad, 113, 122
 'Imād al-Dīn al-Iṣfahānī, Muḥammad, 64 n.50
 Ināl al-Ashqar, 47
 Irwin, Robert, 44
 Isaac ben Joseph ibn Chelo, 118
 Iṣfahbad, 25
 Ismā'īl, sultan 'Imād al-Dīn al-Ṣāliḥ, 45, 83
 Iṣṭakhri, Abū Ishāq Ibrāhīm b. Muḥammad, 122
 Iyās Pasha, governor of Damascus, 48, 265
- 'Izz al-Dīn Aybak al-Mu'azzamī, 39, 75
 'Izz al-Dīn Aydamur, 78
- Jacob of Verona, 118, 121
 Jacques of Vitry, 64, 66, 121
 Ja'far b. Abī Ṭālib, 77, 92
 Jamāl al-Dīn Āqūsh, 81, 269
 Jamal al-Dīn Naṭr, 74, 83
 Janbirdī al-Ghazālī, 48, 49, 81, 93
 Johns, Jeremy, 12, 101, 152, 154
 John, son of Saba, 59
 Joseph, son of Saba, 59
- Kalsbeek, J., 189
 Kāmil, sultan Nāṣir al-Dīn al-Malik, 114, 257
 Khalīl al-Zāhirī, Khalīl ibn Shāhīn, 81, 82, 105, 109, 129, 262
 Khāyir Bak, 92
 Khiḍr, son of sultan Baybars, 43, 80
 Kitbughā, 41
- Lājīm, sultan al-Manṣūr Ḥusām al-Dīn, 88
 LaMonte, John, 57
 Lawrence, chaplain of Karak, 59 n.31
 Leiser, Gary, 34, 36
 Leo iv, king of Armenia, 59 n.30, 69 n.77
 Louis ix, king of France, 41, 256 n.1
 Ludolph of Sudheim, 61 n.39
- Maḥmūd Muḥammad Khān, 99
 Malik al-Amjād Majd al-Dīn Ḥasan, 77
 Ma'mūr al-Qalamṭāwī, 46
 Mankalī al-Ṭarkhānī, 93
 Manṣūr 'Alī, sultan Nūr al-Dīn, 40
 Manṣūr 'Alī, sultan 'Alā' al-Dīn, 45
 Maqrīzī, Taqī al-Dīn Aḥmad ibn 'Alī, 16, 40 n.73, 47, 83
 Martin of Taphilia, 57 n.18, 66
 Mason, Robert, 166, 187, 209, 210, 219, 221, 238, 252
 Mas'ūdī, 'Alī ibn al-Ḥusayn, 123
 Maurice, seigneur of Oultrejourdain, 30
 Meḥmed Edib, 99
 Michael of Sinai, 57 n.12
 Mignanelli, B. de, 156
 Milo of Plancy, seigneur of Oultrejourdain, 30
 Mū'ayyad Shaykh, sultan Sayf al-Dīn, 90
 Mu'azzam 'Īsā, sultan Sharaf al-Dīn, 39, 73, 75, 76, 77, 86 n.169, 87, 90, 114, 128, 257, 260, 261

- Mu‘azzam Tūrānshāh, sultan al-Malik, 40, 256, 257
- Mubārak, chief of the Banū ‘Uqba, 48
- Mughīth, Fakhr al-Dīn ‘Umar, 40, 41, 42, 69, 71, 72, 73, 83, 90
- Muḥammad, Prophet, 36, 256, 263
- Muhammad ‘Alī, governor of Egypt, 51
- Muḥammad b. ‘Abd al-Ḥamīd, 89
- Mu‘izz Aybak, sultan, 40, 41
- Muqaddasī, Shams al-Dīn Abū ‘Abd Allāh Muḥammad, 27, 106, 107, 109, 110, 116, 118, 120, 123
- Murād III, Ottoman sultan, 99
- Mūsā b. Yaghmur al-Yārūqī, 204
- Nabī Hārūn, 68, 92
- Nāṣir Aḥmad, sultan Shihāb al-Dīn, 44, 45, 47, 83, 84, 87, 104, 242
- Nāṣir Ḥasan, sultan Nāṣir al-Dīn, 45
- Nāṣir Muḥammad ibn Qalāwūn, sultan, 44, 45, 83, 88, 90, 92, 104, 127, 128, 206, 224 n.178, 263
- Nāṣir Dāwūd, sultan Ṣalāh al-Dīn, 16 n.40, 39, 69, 73, 86 n.169, 114, 128, 256
- Nāṣir Yūsuf, sultan of Aleppo, 40, 41, 256
- Nicholas, chaplain of Karak, 59 n.31
- Nūr al-Dīn, Maḥmūd b. Zangī, 32, 33, 71
- Nuwayrī, Aḥmad ibn ‘Abd al-Wahhāb, 43, 92, 256
- Oliver of Paderborn, 64, 66
- Öljaytū Khudābanda, 44
- Pagan the Butler, seigneur of Oultrejourdain, 28, 29, 54, 61, 62
- Philip of Nāblus, seigneur of Oultrejourdain, 30, 56 n.10, 62, 128
- Phillips, Henry, 75 n.111
- Praver, Joshua, 29
- Pringle, Denis, 60, 61, 64, 68, 190, 224
- Qāḍī al-Fāḍil, 35, 72 n.94
- Qalāwūn, sultan al-Manṣūr Sayf al-Dīn al-Alfī, 43, 80, 84, 86, 263
- Qalqashandī, Aḥmad b. ‘Alī, 81, 82, 110, 121, 163
- Qānṣūh al-Ghawrī, sultan al-Ashraf, 92
- Qānṣūh b. Musā‘da b. Muslim ibn al-Ghazzāwī, 49, 97
- Qāsim al-Aḥmad, 51
- Qāyṭbāy al-Khāṣṣakī, 48, 266
- Quṭuz, sultan Sayf al-Dīn, 40, 41, 42
- Rainard, chaplain of Karak, 59 n.31
- Ramsūdīn al-Hārūnī, 92
- Reynald of Châtillon, prince of Antioch and seigneur of Oultrejourdain, 1 n.1, 31–37, 56, 58, 60
- Richard I, king of England, 39
- Rogan, Eugene, 107, 109
- Romain de Puy, 28
- Saba, son of George, 59
- Sa‘īd Ḥasan b. al-‘Azīz ‘Uthmān, 39
- Ṣalāh al-Dīn, sultan al-Malik al-Nāṣir, 31–34, 36–39, 69, 71, 72, 73, 81 n.140, 110
- Salāmish, sultan al-‘Ādil Badr al-Dīn, 43
- Ṣalīh Ayyūb, sultan Najm al-Dīn, 31–34, 36–39, 69, 71, 72, 73, 81 n.140, 110
- Sarghtamish, 89
- Ṣārim al-Dīn Barghash al-‘Ādilī, 73
- Sauer, James, 163, 261
- Savage-Smith, Emilie, 177, 179, 180, 252
- Sayf al-Dīn Alus, 92
- Sayf al-Dīn Kabjak, 78 n.128
- Sayf al-Dīn Ruknī al-Nāṣirī, 93 n.209
- Scanlon, George, 213
- Seetzen, Ulrich, 110
- Selim I, Ottoman sultan, 98
- Sha‘bān II, sultan al-Ashraf Nāṣir al-Dīn, 45, 88, 175, 207
- Shajarat al-Durr, 40
- Shams al-Dīn b. al-Muqaddam, 71
- Sharaf al-Dīn ‘Isā b. Khalīl b. Muqātil, 77
- Sharaf al-Dīn ‘Isā b. Muḥannā, 43
- Shayzarī, ‘Abd al-Raḥmān b. Nāṣir, 106
- Shujā‘ al-Dīn ‘Abd al-Raḥman b. ‘Abd Allāh, 76
- Sībāy, governor of Damascus, 48
- Sinjār al-Jāwalī, 88
- Stephanic of Milly, 31, 37 n.64
- Sulaymān I, Ottoman sultan, 98
- Sunqūr al-Ashqar, 43
- Tamīmī, Abū ‘Abd Allāh Muḥammad b. Aḥmad, 123
- Tamurbughūr al-Afḍalī (Minṭāsh), 46
- Thietmar, 61, 68
- Tibble, Stephen, 28
- Timūr, 236
- Tonghini, Cristina, 209, 210
- ‘Ulaymī, Mujīr al-Dīn ‘Abd al-Raḥmān ibn Muḥammad, 16
- Ulric, viscount of Nāblus, 65 n.53

- ʿUmarī, Ibn Faḍl Allah Shihāb al-Dīn
 Aḥmad b. Yahyā, 75, 109
 ʿUthmān Pāsha, 50
- Walter of Beirut, seigneur of
 Oultrejourdain, 30
 Whitcomb, Donald, 152
 William, chaplain of Karak, 59 n.31
 William of Tyre, 26, 28, 31, 57, 61, 110,
 113, 115
- Yalbughā al-Nāṣirī, 46
 Yāqūt, ibn ʿAbd Allāh al-Ḥamawī, 26,
 66, n.65, 106, 111, 116, 121
 Yashbak Ṭāz al-Muʿayyadī, 47
 Yūsuf, painter from Damascus, 238
 Yūsuf Majālī, 51 n.126
- Zāhir al-Dīn, amīr of Damascus, 25
 Zāhir al-ʿUmar, 183
 Zayn al-Dīn Baraka al-Jūbānī, 93

Tribal Groups, Organisations, and Religious Orders

- Annales* historians, 15, 17
- Baḥriyya, 40, 41, 42, 71, 82
 Banū ʿAṭaʾ, 105
 Banū Aṭiyya, 49, 105
 Banū Faḍl, 43
 Banū Jarrāh, 26 n.8
 Banū Lām, 49, 83, 104
 Banū Mahdī, 40, 82, 83, 104 n.13
 Banū Naʿīm, 108, 131
 Banū Numayr, 47, 104
 Banū Rabī, 47, 83, 104
 Banū Ṣakhr, 104, 107, 131
 Banū ʿUqba, 43, 46, 48, 82, 83, 104
 Banū Zāhir, 104
- Hawayṭāt, *ʿurbān*, 49
 Hospitallers, 58, 63, 68
- Jabaliyya, 83
 Jamdāriyya, 40
 Jughaymān, *ʿurbān*, 49
- Khafāja, *ʿurbān*, 43
- Mafārija, *ʿurbān*, 49, 97
 Majālī, family, 51, 52
 Miller survey, of the Karak plateau, 111,
 137, 138, 140, 144, 149, 175 n.124,
 184, 244, 247
 Muḥammadīn, *ʿurbān*, 108
- Order of the Hospital, see Hospitallers
- Qays, faction of, 46
- Shahrazūriyya, 42
- Templum Domini, 30, 59
- Yaman, faction of, 46
- Zāhiriyya, 71

Place Names

- Abū Ghawsh, 19 n.44, 149 n.22, 152
 n.39, 166 n.89, 174, 175 n.125, 191
 n.27, 196 n.53, 219 n.142
 Abū Thawab, 106
 Acre, 16, 41, 56 n.6, 183, 189 n.18, 198
 n.63, 201 n.73
 Ādar, 88
 Aegean sea, 200
 Afāmiyya, 217 n.140
 ʿAfūla, 170, 171 n.110, 204 n.89
 Aḥamant, see ʿAmmān
 ʿAjlūn, 43, 49, 52, 80 n.136, 95, 101,
 106, 107, 112, 124, 179
 ʿAkka, see Acre
- ʿAkko, see Acre
 Akriyya, 90 n.190
 Aleppo, ix, 31, 40, 43, 44, 46, 78, 171
 n.110, 179, 209, 221 n.155, 224 n.174,
 228 n.189, 230 n.201, 240 n.264, 251
 n.17, 252, 256
 Alexandria, 177 n.132, 180, 201 n.73,
 206, 215 n.129, 217 n.140, 221 n.155,
 230 n.201, 235, 237 n.241, 240 n.264,
 250
 ʿAmmān, 27, 30, 57, 59, 64, 65, 66, 76,
 80, 89, 106, 107, 128, 130, 131, 152
 n.38, 169, 206 n.89, 217 n.141, 261,
 269

- ʿĀna, 219 n.147
 Anatolia, 237
 Antioch, 16, 31, 59 n.27, 201 n.73, 213,
 219 n.142, 223–24 n.172, 237 n.242,
 240 n.264
 Antiochet, 58 n.18
 Apamea, see Afāmiyya
 Aphrodisias, 196 n.54
 ʿAqaba, 10, 26, 31, 48, 64, 76, 92, 99,
 103, 116, 131, 152, 192 n.37, 261,
 265, 271
 Arabia, 4, 10, 98, 119, 127
 ʿArandal, see Gharandal
 ʿArāʿir, 152 n.39
 Arḍ al-Karak, see Karak plateau
 Arīḥā, 10, 27
 ʿArish, 48
 Arstif, 78
 Ascalon, see ʿAsqalān
 ʿAsqalān, 32, 35 n.54, 37, 69, 240 n.264
 Aswit, 65 n.56
 Athlith, 19 n.44, 166 n.89, 190 n.24, 192
 n.37, 196 n.55, 198 n.63
 ʿAydḥāb, 35, 116, 240 n.264, 250
 Ayla, 10, 26, 30, 33, 48, 67, 69, 72, 116,
 131, 152, 192 n.39, 271
 ʿAyn Bayḍa, 7 n.14
 ʿAyn Fīdān, 123 n.157
 ʿAyn al-Franj, 7 n.14
 ʿAyn al-Ḥābis, 7 n.14
 ʿAyn Hazar, 109 n.49
 ʿAyn Jālūt, 41
 ʿAyn Kārim, 19 n.44, 167 n.94, 204 n.89
 ʿAyn Sara, 7 n.14
 ʿAyn Shams, 204 n.89, 223 n.172, 224,
 n.174
 ʿAyn al-Sitt, 67
 ʿAyzariyya, 19 n.44, 166 n.89, 167 n.94,
 169 n.98, 171 n.110, 174, 192 n.37,
 201 n.73, 202 n.80, 204 n.89
 Azraq, 74, 76, 129, 261

 Baʿalbak, 43, 165, 171 n.110, 177 n.132,
 192 n.37, 214 n.121, 217 n.140, 228
 n.189, 225, 230 n.201
 Badiya al-Shām, 43, 103, 127, 262
 Bālis, 177 n.132, 180, 210 n.108, 230
 n.201, 237 n.232
 Balqāʾ, 2, 10, 25, 27, 28, 32, 51, 52,
 75–78, 80–81, 90, 91, 102, 104, 105,
 106, 107, 108, 126, 128, 130, 133,
 150, 163, 198, 248, 250, 252, 258,
 260, 263, 264, 266, 267, 268, 269, 270
 Banā ʿIlwān, 108 n.44

 Bāniyās, 39
 Baradiyya, 90 n.190
 Baṣrā, 122
 Baysān, 42, 120, 152 n.35, 174 n.122,
 192 n.35, 196 n.55, 201 n.73, 204 n.89
 Bayt Rāma, 108
 Bayt Sāḥūr, 175 n.125
 Beirut, 179 n.132, 198 n.63, 214 n.121,
 222, 235 n.229, 237 n.241, 250
 Belmont castle, 198 n.63, 206 n.89
 Belvoir castle, 198 n.63
 Beni Salem, 57, 58
 Bethany, see ʿAyzariyya
 Bet Sheʿan, see Baysān
 Bilād al-Sham, ix, 2, 3, 4, 9, 10, 11,
 12, 13 n.36, 15, 18, 19, 20, 32, 44,
 45 n.98, 49, 77, 85, 90, 95, 102 n.5,
 103, 109 n.49, 115, 116, 122, 126,
 127, 128, 129, 137, 145, 151–52, 154,
 157–58, 167, 169, 171, 174, 175, 179,
 182 n.152, 188, 191, 192, 194, 196,
 198, 204, 206, 214, 215, 217, 219,
 221, 223, 224, 227, 229, 230, 234,
 235, 236, 248, 249, 250, 251, 253,
 262, 264, 265, 268, 270, 271
 Bilāqīs, 90 n.190
 Burj al-Abyaḍ, 90 n.190
 Burj al-Aḥmar, 167 n.94, 170, 175 n.125,
 189 n.15, 190 n.24, 191, 196 n.55, 198
 n.63, 200 n.67, 204 n.89, 214, 220
 n.148, 222, 223 n.171, 224, 230 n.201,
 235 n.229, 240 n.264
 Burj al-Banawī, 87, 174
 Burj Raqm, 88
 Burj al-Ṣaʿūb, 87
 Burj al-Zāḥir, 3 n.5, 67, 87, 138
 Buṣrā, 59, 97 n.229, 152 n.39, 169, 191,
 214, 219 n.142

 Cairo, 2, 16, 28, 32, 33, 34, 35, 39, 40,
 41, 42, 43, 45, 46, 47, 80 n.135, 83,
 84, 85, 90, 91, 92, 95, 104, 112, 114,
 127, 164, 206, 232 n.202, 233 n.211,
 234, 235, 236, 240 n.264, 243, 246,
 250, 251, 257, 259, 262, 264, 265,
 267, 272
 Caesarea, 189 n.15, 190 n.24, 191 n.27,
 196 n.55, 198 n.63, 219 n.147
 Canzir, see Khānzira
 Cave de Sueth, see Habīs Jaldak
 Cave of the Patriarchs, Khalīl, 119, 132
 Cave of the Seven Sleepers, see Raqīm
 Celle, see Khirbat al-Silʿa
 China, 271

- Coreb, 58 n.18
 Cyprus, 31, 121, 159, 163, 200, 223, 224, 253, 272 n.16
- Dab'a, 98
 Dakhla Oasis 217 n.140
 Dāliya, 161 n.70
 Damascus, ix, 2, 16, 20, 25, 28, 32, 34, 39, 41, 43, 46, 48, 49, 50, 51 n.128, 69, 76, 78, 81, 90, 93, 95, 97, 98, 103, 105, 107 n.39, 112, 114, 123 n.153, 127, 128, 129, 130, 156, 164, 165, 167 n.94, 171 n.110, 173, 175, 177 n.132, 179, 192 n.37, 196 n.54, 197, 198 n.63, 204 n.89, 209, 210, 211, 217 n.140, 219, 221, 228 n.189, 230, 232 n.202, 233, 234, 235 n.229, 236, 238, 240, 243, 246, 248, 249, 250, 251, 252, 247, 259, 262, 264, 265, 267, 268, 270, 271, 272
 Damietta, 38, 130, 257
 Dāmiya, 91, 204 n.89
 Darb al-Ḥajj, 97 n.229
 Darb al-Malik, see King's Highway
 Darb al-Sulṭān, see King's Highway
 Dārūm, 39 n.72
 Dayr al-Kahf, see Raqīm
 Dayr Mar Saba 166 n.89
 Dead Sea, 2, 9, 11, 15, 25, 30, 37, 60, 67, 80, 91, 93, 102, 112, 120, 121, 122, 123, 124, 125, 126, 128, 129, 132, 134, 157, 159, 161, 163, 164, 166, 169, 190, 248, 249, 262, 263, 264, 266, 268, 270, 272
 Dhāt Ḥajj, 98 n.233
 Dhibān, 78 n.127, 131, 150, 161 n.70, 175 n.125, 191 n.27, 192 n.37, 198 n.63, 214 n.121
 Dibāj (Dhibān?), 90 n.190
 Dibyān (Dhibān?), 90 n.190
 Dimashq, *jund* of, 27
 Diyār Bakr, 38
 Diyār Mudar, 38
 Dūma, 240, 242, 250
- Egypt, 10, 19, 20, 26, 32, 33, 35, 36, 37, 38, 39, 40, 44, 45, 46, 47, 51, 81 n.140, 83, 114, 118, 121, 123 n.153, 126, 131, 132, 133, 167, 174, 179 n.132, 181, 182, 207 n.94, 214, 216, 217, 224, 227, 228, 229, 239, 243, 246, 250, 251, 252, 256, 265, 268, 270
- Euphrates, 209, 210, 237
- Fahl al-Fawqā, 108
 Fahl al-Tahta, 108
 Farāma, 26 n.8
 Fassu'ā, 99
 Fayfā', 91, 122, 158 n.59, 169 n.98, 191, 196 n.53, 206 n.89, 248
 Faynān, see Wādī Faynān
 Ferrara, 201 n.75, 251
 Filastīm, *jund* of, 27
 France, 229
 Fūla, 175 n.125
 Furn, 123 n.157, 124
 Fuṣṭāt, 174 n.122, 196, 200 n.70, 201 n.73, 211, 213, 214, 215, 216, 217 n.136, 219, 221, 222, 224 n.174, 227, 228, 229, 230 n.201, 233, 235, 237 n.229, 240 n.264, 252
- Galilee, 57
 Gaza, ix, 10, 40, 47, 48, 80, 90, 91, 101, 112, 114, 115, 116, 168, 247, 269
 Gazit, 161 n.70, 166 n.89, 169 n.98, 191 n.27, 198 n.63
 Gerba, see Wādī Jurba
 Gharandal, 27, 150, 152
 Ghawr, 10, 25, 27, 32, 52, 64 n.51, 101 n.3, 108, 111, 116, 121, 122, 124, 125, 126, 131, 132, 133, 150, 159, 161, 163, 167 n.94, 169, 191, 195, 196 n.53, 198 n.63, 206 n.89, 214 n.121, 215 n.129, 217 n.140, 221 n.155, 242 n.264, 246, 248, 249, 262, 266, 268
- Greater Syria, see Bilād al-Sham
 Greece, 182, 251
 Guangdong, 239
 Guangxi, 239
 Gulf of 'Aqaba, 35
- Habīs, 30, 64, 65, 66, 73, 258, 259 n.3
 Habīs Jaldak, 26 n.6
 Ḥafar, 90 n.190
 Haifa, see Ḥayfā
 Ḥamā, 19 n.44, 42, 48, 78, 150 n.28, 165, 166 n.89, 167 n.94, 171 n.110, 177 n.132, 179, 180, 181 n.149, 191 n.27, 192, 196 n.55, 201 n.73, 203, 204 n.89, 206, 207, 214 n.121, 215, 216, 217 n.136, 218 n.140, 219 n.142, 220, 221 n.155, 223 n.172, 224 n.174, 226 n.180, 227, 228 n.189, 229, 230 n.20, 232, 233, 234 n.214, 235 n.229, 236, 239 n.256, 242 n.264, 252
 Hammat Gader, 198 n.63
 Hara, 59

- Har Ḥamran, 166 n.89
 Haram al-Sharīf, 114, 118
 Hārim, 242 n.264
 Harrān, 37 n.61, 219 n.142
 Hasā, see Qal'at al-Hasā
 Hasbān, 77, 80, 85, 89, 90 n.190, 107, 109, 128, 131, 150, 161 n.70, 167 n.94, 175 n.125, 189 n.15, 196 n.55, 202 n.80, 204, 206, 223 n.171, 224, 227, 230 n.201, 250, 261, 263, 269
 Ḥaṭṭīm, 31, 36, 37, 38
 Hawrān, 114, 201
 Ḥayfā, 175 n.125, 196 n.55, 198 n.63, 222 n.163, 224, 227, 230 n.201, 235 n.229
 Hebron, see Khalīl
 Hijāz, 10, 36, 76, 82, 99, 111, 116, 251, 265
 Hims, 27, 42, 243 n.269
 Ḥisma, 2
 Ḥiṣn al-Akrād, 43
 Ḥiṣn al-Ghurāb, see Karak
 Hobelet, 57
 Homṣ, see Ḥimṣ
 Hurmus, see Khirbat al-Hurmūz

 Île de Graye, see Qal'at Ayla
 India, 122 n.144
 Indian Ocean, 36, 116, 258
 Inner Mongolia, 233 n.206
 Iran, 235, 243, 252
 Iraq, 43, 76, 82, 103, 122, 207 n.99
 'Irāq, 112 n.74
 'Irāq al-Amīr, 131
 Israel, ix, x, 18
 Istanbul, 49, 181, 182
 Italy, 184, 200, 223 n.170, 224, 229, 237 n.242, 253, 259, 271
 Iznik, 222, 235

 Jabal Bishr, 179
 Jabal Hārūn, 68, 93
 Jabal al-Tūr, see Mount Tabor
 Janbā, 90 n.190
 Jarash, 148 n.21, 161 n.70, 198 n.63
 Jaūrat al-Farā'ūn, see Qal'at Ayla
 Jericho, 27, 120, 122, 123
 Jerusalem, ix, 2, 9, 16, 19 n.44, 25, 26, 38, 39 n.71, 48, 51, 54, 57, 59 n.30, 77, 81, 91, 97, 101, 106, 107 n.39, 110, 115, 117, 118, 127, 133, 148 n.21, 158 n.59, 165, 166 n.89, 167, 168, 169, 171 n.110, 173, 175, 177 n.132, 179, 180, 181, 183, 188 n.11, 190, 191, 192 n.37, 194, 195, 196, 198 n.63, 200 n.67, 201, 202 n.84, 204 n.89, 206, 209, 214 n.121, 215, 217 n.140, 220, 221, 227 n.181, 230 n.199, 249, 252 n.21, 267, 269
 Jibāl, see Sharāt al-Jibāl
 Jibāl Karak, 95, 96, 101 n.3, 116, 117, 131
 Jidda, 271
 Jingdezhen, 239, 240
 Jordan, ix, x, 9, 10, 11, 12, 13, 14, 15, 17, 18, 20, 21, 25, 26, 27, 28, 31, 33, 34, 36, 38, 39, 42, 43, 44, 45, 46, 47, 49, 50, 51, 52, 53, 60, 61, 62, 64, 67, 72, 76, 77, 80, 82, 83, 84, 85, 90, 92, 95, 96, 97, 98, 99, 100, 102, 104, 110, 113, 115, 122, 126, 128, 129, 132, 133, 134, 137, 145, 146 n.14, 147, 150, 151, 167, 169 182 n.156, 184, 189, 192, 195, 196, 198, 206, 224, 235, 246, 247, 249, 250, 251, 252, 257, 258, 259, 260, 261, 262, 263, 265, 266, 268, 269, 270, 271, 272
 Jordan valley, 2, 80, 89, 90, 102, 129, 132, 133, 134, 150, 152, 157, 161, 163, 164, 166, 198 n.63, 248, 253, 262, 264, 266, 268, 272
 Jordan river, 15, 25, 37, 60, 91, 120, 121, 124, 128
 Jughaymān, see Mudawwar
 Julfār, 234, 238 n.254, 240 n.259

 Kabri, 189 n.18
 Kafr Almā, 107
 Kahf, 93
 Karak, ix, 1, 2, 3, 4, 7, 8, 9, 10, 11, 13–21, 23, 25, 29, 30, 32, 36–64, 67–75, 77, 78, 80–93, 95, 96, 97, 98, 100, 101 n.3, 102–104, 109, 110, 111, 112, 121, 124, 126–30, 133, 137–40, 144–51, 154, 156–61, 163, 164, 166, 168, 169, 170, 173, 174, 175, 177, 179, 181, 182, 184–92, 194, 195, 196, 197, 198, 200–204, 207–14, 216, 219, 220, 222, 223, 224, 226–30, 233, 234, 235, 238, 239, 240, 242, 244, 245, 246–54, 256–72
 Karak plateau, 2, 4, 9, 10, 11, 12, 13, 50 n.123, 52, 102, 104, 109, 111, 112, 113, 126, 131, 137, 140, 144, 149, 150, 151, 154, 161 n.70, 171, 175, 182, 184, 194, 195, 196, 198, 204, 214, 217, 224, 230, 235, 245, 246, 248, 253, 254, 258, 261, 264, 266, 267, 270, 271

- Karkha, see Karak
 Kawm al-Dikka, see Alexandria
 Khalīl, 2, 30, 46 n.102, 51, 54, 56, 57,
 59 n.24, 68, 77, 78, 80, 90 n.190, 91,
 93, 101 n.3, 102, 105, 112, 115–20,
 126, 128, 132, 158 n.59, 161 n.70, 166
 n.89, 169 n.98, 175 n.125, 204 n.89,
 219 n.140, 248, 268 n.12, 269
 Khān al-Zabīb, 98
 Khānzīra, 57, 58, 161 n.70
 Khaybar, 42, 127
 Khirbat al-ʿAl, 156
 Khirbat al-ʿAyadiyya, 200 n.67
 Khirbat Birzayt, 204 n.89
 Khirbat Burj, 188 n.11
 Khirbat Dūhala, 131
 Khirbat al-Dusaq, 98
 Khirbat Fāris, 102 n.4, 146 n.14, 148
 n.19, 149 n.27, 152 n.39, 166 n.89,
 167, 171, 189 n.15, 190 n.20, 191
 n.27, 195, 204 n.88, 227, 230 n.200,
 245, 247, 264 n.9
 Khirbat Faynān, see Wādī Faynān
 Khirbat al-Hurmūz, 64, 66, 73
 Khirbat al-Minyā, 194 n.39
 Khirbat al-Nakhl, 182 n.151
 Khirbat al-Nawāfla, 150
 Khirbat al-Nuḥās, 123
 Khirbat Shaykh ʿIsā, 122, 161 n.70, 167
 n.94, 169 n.98, 190 n.21, 195, 215
 n.129, 217 n.140
 Khirbat al-Silʿa, 64, 66, 73, 80, 89
 Kingdom of Jerusalem, 27, 28, 31, 33,
 36, 37, 38, 57, 59, 60, 103, 259, 260,
 267
 King's Highway, 1, 8, 10, 76, 91, 98, 111,
 133, 156, 189, 246, 251, 259, 264, 270
 Konya, 219
 Kouklia, 160, 161
 Kūtahya, 234, 251
 Kuwait National Museum, 237 n.241,
 238

 Lajjūn, Jordan, 8, 111, 179 n.132, 180,
 242 n.264, 250
 Lajjūn, Palestine, 97, 101
 Lake Tiberias, 124
 Latin Kingdom, see Kingdom of
 Jerusalem
 Lebanon, ix, x, 19, 253
 Levant, 2, 16, 18, 32, 37, 106, 126, 129,
 139, 156, 171, 173, 175, 182, 195,
 201, 213, 215, 217, 222, 228, 230,
 236, 240, 242, 254, 266

 Li Vaux Moïse, see Wuʿayra
 Liwāʾ al-Karak, 4
 Longquan, 239, 242

 Maʿāb, 25, 27, 109, 110
 Maʿāb, see Rabba
 Maʿān, 1, 10, 52, 76, 78, 80, 91, 97, 98,
 115, 131
 Maʿanit, 166 n.89, 204 n.89
 Maʿarrat al-Nuʿmān, 210, 214
 Mādabā, 52, 62, 131, 206 n.89, 258
 Madrasa al-Bārūdiyya, Jerusalem, 114
 Madrasa of Tatār al-Hijāziyya, Cairo,
 236
 Madrasa al-Ṭāziyya, Jerusalem, 110,
 114
 Malka, 198 n.63
 Mardīn, 44
 Marescalcia, 64 n.51
 Marj Dābiq, 48
 Marj al-Thāniyya, 2
 Mazār, 92
 Mecca, ix, 1, 10, 34, 35, 36, 39 n.71, 92,
 111
 Medina, ix, 1, 10, 34, 35, 36, 42, 71, 111
 Mediterranean, 3, 18, 20, 21, 106, 119,
 127, 133, 197 n.61, 206, 246, 249,
 252, 258, 270
 Metropolitan Museum, New York, 228
 Michael C. Carlos Museum, Emory
 University, Atlanta, 4 n.7, 138, 149
 n.24
 Milāqis (Bilāqis?), 90 n.190
 Mīnā, 19 n.44, 171 n.110, 200 n.67, 201
 n.73, 217 n.140
 Montgisart, 32
 Montréal, see Shawbak
 Mount Tabor, 25, 171 n.112, 177 n.132,
 180
 Mudawwar, 99
 Mudaybiʿ, 147, 182 n.151
 Muḡhārat al-Warda, 106, 161 n.70
 Mukhayba, 124
 Mushrifā, 107
 Muʿta, 76, 77, 92, 111, 149 n.27, 246,
 263

 Nāblus, 30, 48, 91, 101, 105, 107 n.39,
 126
 Nahalal, 171 n.110, 206 n.89
 Naḡal Yattir, 173 n.112, 204 n.89, 206 n.89
 Nanchang, 239, 242 n.265
 Naqʿa, 67 n.66
 Naqb al-ʿAqaba, 116

- Nāšira, 107 n.39, 183, 198 n.63, 206 n.89
 Nazareth, see Nāšira
 Negev, 158
 Nicosia, 223 n.172, 224 n.174
 Nimrīn, 121 n.139
 Nishapur, 179, 180, 252
- Obelet, see Hobelet
 Oultrejourdain, 25, 27, 28, 30, 31, 32, 34, 37, 54, 56, 57, 58, 59, 60, 63, 64, 67, 72, 76, 77, 128, 259, 260
- Padua, 200
 Palaeopaphos, see Kouklia
 Palestine, 9, 11, 13, 20, 21, 32, 41, 43, 44, 50, 51, 67, 90, 91, 93, 97, 100, 105, 111, 112, 115, 116, 120, 122, 131, 134, 150, 151, 166, 167, 168, 169, 174, 179, 181 n.149, 184, 188, 189, 190, 191, 192, 196, 198, 200, 203, 206, 211, 219, 224, 230, 235, 246, 247, 248, 249, 250, 251, 252, 258, 259, 264, 266, 268, 269, 271, 272
 Palestine Authority, ix, x, 18
 Paphos, 200 n.67
 Persian Gulf, 234, 251
 Petra, 40, 65, 67, 68, 73, 115, 198, 258
 Petra of the Desert, see Karak
 Pescadores islands, 239 n.255
 Philippines, 239 n.259, 240
- Qal'a, 107
 Qal'at Ayla, 33, 35, 64 n.52, 69, 72, 89
 Qal'at al-Balqa', see Dab'a
 Qal'at al-Ḥasā, 99
 Qal'at al-Ja'bar, 209, 210 n.108, 211 n.147, 229 n.196
 Qal'at al-Rabaq, see 'Ajlūn
 Qanbis, 90 n.190
 Qāqūn, 165
 Qaṣr al-Banāt, Raqqa, 164
 Qaṣr al-Ḥayr East, 154, 171 n.110, 173 n.112, 214 n.121, 215, 217 n.140, 220 n.148, 221 n.155, 229 n.194, 230 n.201, 237 n.232, 238
 Qaṣr al-Shabīb, 91, 98
 Qāṭ'a al-Mūjīb, 90 n.190
 Qatība, 90 n.190
 Qaṭrāna, 98, 99, 114 n.83
 Qayṣāriyya, see Caesarea
 Qubayba, 19 n.44, 158 n.59, 167 n.89, 175 n.125, 179 n.132, 180, 190, 191 n.27, 192 n.37
- Qulzum, 80
 Qūniyya, 90 n.190
 Qūṣ, 242 n.264
 Quṣayr Qadīm, 116, 167, 168, 169 n.100, 171 n.110, 177 n.132, 180, 195 n.49, 200 n.70, 214 n.121, 215, 219 n.141, 224, 229 n.194, 230 n.201, 240 n.259, 242 n.264, 250
- Rabba, 10, 27, 59 n.27, 111 n.69, 149 n.27, 246, 258
 Rābigh, 35
 Rāfiqa, 158, 194 n.39, 214, 219 n.142, 221 n.155, 229, 237 n.239
 Ramla, 169 n.98, 173 n.112, 191 n.27, 192 n.37, 198 n.63, 206 n.89
 Raqīm, 77, 93
 Raqqa, 152, 156, 157, 158, 173 n.115, 179 n.132, 180 n.144, 186 n.7, 188 n.12, 194 n.39, 210, 214, 217 n.140, 219, 221 n.155, 224 n.174, 229, 237, 252
 Red Sea, 10, 30, 31, 34, 35, 36, 37, 67, 72, 80, 89, 92, 250, 258, 271
 Rhodes, 121
 Riḥā, see Jericho
 Rujūm, 122, 217 n.140, 221 n.155, 230 n.201, 248
 Rumaymin, 109
 Ruṣāfa, 158 n.59, 171 n.110, 173 n.112, 214, 217 n.136, 218 n.140, 219, 220, 221, 252
 Russia, 181
- Sabaṣṭiyya, 175, 202 n.80, 206 n.89
 Ṣafād, 43, 48, 78, 97, 101
 Ṣāfiyya, 90 n.190
 Ṣafra, 90 n.190
 St Abraham, see Khalīl
 St. Catherine, monastery of, Sinai, 30, 59, 60, 68, 69, 114
 Sāhil, 256, 257
 Sal'a, see Khirbat al-Sil'a
 Salkhad, 39
 Saḷḷ, 43, 69, 75, 76, 80, 89, 101 n.3, 105, 106, 107, 108, 109, 124 n.159, 128, 129, 130, 260, 261, 269
 Samaria, 57
 Samarqand, 179
 Samsat, 210 n.108, 229 n.196
 Saraḡhane, Istanbul, 182
 Ṣāṭāf, 152 n.39, 167 n.89, 189 n.17, 195 n.39
 Ṣayḥūn, 43

- Scythopolis, see Baysān
 Shamit, 117
 Sharāt, see Sharāt al-Jibāl
 Sharāt al-Jibāl, 2, 25, 27, 102, 113, 114, 126, 131, 264, 267
 Sharon plain, 165
 Shawbak, 9 n.21, 10, 11, 26, 27, 28, 29, 30, 33, 36, 37, 38, 39, 40, 42, 43, 44 n.93, 47, 48, 49, 54, 56, 57, 58, 59, 60, 61, 65, 67, 68, 69, 74, 77, 78, 83, 84 n.163, 86 n.169, 88, 89, 90, 92, 93, 95, 96, 97, 98, 101 n.3, 104, 110 n.61, 113, 114, 115, 116, 117, 128, 129, 130, 131, 133, 134, 156, 163 n.75, 164, 189 n.15, 194, 214 n.121, 215, 242 n.264, 248, 249, 258, 260, 263, 264, 267, 268, 269, 270
 Shayzar, 73 n.98
 Sicily, 229
 Sidon, 181
 Sinai, 10, 44, 206, 234, 250, 271
 Sinan shipwreck, 239 n.254, 240
 Sofia, 181
 Spain, 229
 Sulṭānābād, 227, 229
 Syria, ix, x, 9, 10, 13, 15, 19, 20, 26, 27, 32, 33, 37, 39, 41, 43, 45, 46, 47, 49, 71, 74, 78, 81, 83, 90, 95, 105, 106, 107, 121, 127, 131, 133, 134, 157, 158, 166, 179, 181 n.149, 184, 188, 191, 192, 203, 206, 209, 210, 211, 217, 219, 221, 217, 219, 221, 228, 230, 235, 236, 237, 243, 248, 249, 250, 252, 253, 259, 264, 266, 269, 272
 Ṭabaqat Faḥl, 152 n.36, 157 n.58, 160, 161 n.70, 169 n.98, 175 n.125, 196 n.55, 197 n.61, 198 n.63, 206 n.89, 222 n.163, 224 n.174, 230 n.201
 Tabgha, 161 n.70, 167 n.89, 196 n.55, 198 n.63, 217 n.140
 Tabrīz, 41
 Tabūk, 98 n.233
 Tadmūr, 48
 Ṭāfila, 10, 57, 64, 66, 73, 80, 112, 115, 116, 117, 131, 133 n.19, 264, 269
 Ṭafs, 90 n.190
 Tal Abū Qaʿdān 148 n.21, 150, 152 n.39, 163, 167 n.94, 168, 189, 198 n.63, 206 n.89, 217 n.140, 220 n.148, 222, 223 n.171, 224
 Tal Abū Ṣarbut, 161 n.70
 Tal ʿArqa, 158 n.59, 192 n.37
 Tal Barī, 217 n.140, 224 n.174, 230 n.201
 Tal Danith, 25
 Tal Fandr, 160 161 n.70
 Tal Fukkhār, 186 n.7, 188 n.12
 Tal al-Ḥasī, 167
 Tal Ḥrīm, 219 nn.141–142
 Tal Jazar, 206 n.89
 Tal Jimna, 147 n.17, 150, 156, 158, 168 n.94
 Tal Malabiyya, 194 n.39
 Tal Minis, 194 n.39, 210, 217 n.140, 219, 229 n.196, 230 n.201, 237 n.232, 252
 Tal al-Mutasallim, 196 n.55, 198 n.63, 206 n.89, 217 n.140, 223 n.171, 224 n.174, 230 n.201, 235 n.229, 236 n.233
 Tal Nimrīn, 161 n.70, 206 n.89
 Tal Qaymūn, 158 n.59, 181 n.149, 191 n.27, 206 n.89, 223 n.171, 224 n.174, 230 n.201
 Tal Rifʿat, 192 n.37, 217 n.140
 Tal al-Ṣāfiyya, 201 n.73
 Tal Saḥl al-Ṣarābat, 175 n.125
 Tal Saylūn, 173 n.112, 230 n.201
 Tal Shahīn, 152 n.35, 188 n.12
 Tannīs, 26 n.8
 Ṭarīq al-Bint, 98
 Ṭarīq al-Raṣīf, see King's Highway
 Ṭarīq Ṣadr wa Ayla, 10, 72
 Ṭawāḥīm al-Sukkar, 125, 163 n.76, 190 n.21, 195, 206 n.89
 Taymāʾ, 34, 111
 Thāniyya, 1, 111, 157
 Thebes, Greece, 181
 Tiʿinnik, 150, 189 n.15
 Trapani, Italy, 237 n.242
 Traphyla, see Ṭāfila
 Tripoli, 78, 165, 171 n.110, 179, 192 n.37, 195 n.49, 198 n.63, 201 n.73, 214 n.121, 227, 228 n.191, 230 n.201, 242 n.264
 Topkapi, Istanbul, 232, 233, 239 n.254
 Ṭūḍ, 215 n.129, 217 n.140, 242 n.264
 Tughluqid palace, Delhi, 233
 Tuotekuo, 233
 Ṭūr, 234, 250, 271,
 Turkey, ix, x, 181, 182, 251
 Tuscany, 117
 Tyre, 37, 56 n.6
 Udhrūh, 27, 99
 Ukhaydir, 98 n.233
 ʿUlā, 98 n.233
 Umm al-Raṣās, 62, 258
 Umm al-ʿImad, 107 n.39

- Umm al-Jimāl, 150 n.31
 Umm al-Thalj, 63, 86
 Umm Qays, 198 n.63
 ʿUnayza, 98
 Urdunn, *jund* of, 27
- Varna, 181
 Vaux Moïse, see Wuʿayra
 Venice, 201, 251
 Verona, 251
 Via Nova Traiana, see King's Highway
- Wādī ʿArab, see Wādī ʿAraba
 Wādī ʿAraba, 2, 15, 123, 128, 129, 152
 n.39, 169 n.98, 198 n.63, 268
 Wādī al-Bustān, 61, 74
 Wādī Dāna, 123 n.157
 Wādī Faynān, 123, 124, 261, 263, 268
 Wādī al-Ḥasā, 10, 13, 88, 113, 116, 126,
 131, 133 n.19, 150, 248, 267, 271
 Wādī Ḥasbān, 109 n.49
 Wādī ibn Hammād, 112 n.74
 Wādī ʿIsal, 152 n.39
 Wādī Jurba, 57, 58 n.18
 Wādī Karak, 93
 Wādī Kharbar, 109
 Wādī al-Mūjib, 9, 10, 20, 21, 27, 28, 33,
 51, 52, 76, 81, 128, 258, 262, 268,
 272
- Wādī Mūsā, 25, 26, 27, 30, 57, 59, 64,
 66 n.65, 68 n.73, 115
 Wādī Ramill, 109
 Wādī al-Salt, 109
 Wādī Shuʿayb, 109
 Wādī al-Silʿa, 66
 Wādī Sīr, 109
 Wādī al-Yābis, 161 n.70, 206 n.89
 Wādī Zarqāʾ, 2, 11, 30, 38, 60, 76, 78, 91
 n.195, 106, 126, 127, 149, 261, 265,
 266, 231
 Wāsiṭ, 219 n.147
 Wuʿayra, 30, 56, 64, 65, 66, 68, 72, 115,
 152, 189, 198, 217 n.140, 258, 259, 261
- Yarmūk, 26, 27
 Yiannitsa, 181
 Yemen, 36, 44
- Zahr al-ʿAqaba, see Fassuʿā
 Zarāʾ, 123
 Zarāʿā, 121 n.139
 Zarqāʾ, 26 n.6, 107
 Zarqāʾ river, 91
 Zirʿm, 189 n.18, 198 n.63, 206 n.89, 217
 n.140
 Zīzaʾ, 91, 98, 107, 111
 Zughar, 91, 98, 107, 111
 Zuwayr, 90 n.190

Books and Archives

- Assises of Jerusalem*, 54, 56, 58
Nihāyat al-arab fī funūn al-adab, 256
Qurʾān, 93
- Geniza archive, 106, 122, 164
 Ḥaram archive, 110, 114

Events and Objects

- Black Death, 45, 262
 True Cross, 36, 38

Technical Terms

- amīn*, 95
amīr al-ʿarab / amīr al-ʿurbān, 72, 82, 98
amīr al-ḥajj, 49, 97
amīr ṭablkhāna, 74 n.105, 84
aqā, 101, 105, 108, 112, 117, 120, 124
arbab al-suyūf, 83
- atābak al-ʿasākīr*, 45, 81
awlad al-nās, 82 n.146
bāj bazār, 101 n.3, 112
barīd, 82, 85, 90, 264
bayt al-māl, 96, 112, 120

- bayt al-sharāb*, 242 n.267
beylerbey, 49, 50
birka, 87, 107
burj, 98
 butler, 56
- casal*, 58 n.18, 59
castellan, 54, 56
 chamberlain, 56
 chancery, 56
cour, coins et justice, 55–56
cour de la fonde, 58
cour des bourgeois, 58, 128
- daftar*, 11 n.29, 96 n.223, 101, 102, 105,
 108, 112, 113, 116, 117 n.103, 118
 n.118, 120, 124, 125, 130, 132, 134,
 265, 266, 267
daftardār, 95, 96
daftar-i hakkane, 109
daftar-i jadīd, 101, 102 n.6, 107
daftar-i muḡaṣṣal, 95, 100
demesne, 54
dīnār, 78, 116, 119, 130
dirham, 3 n.5, 78, 84
dīwān, 2
dīwān al-inshā', 71
dīwān al-istifā', 71
dīwān al-jaysh, 71
dīwān al-karak, 71
- ghirāra*, 101
ghulām al-salṭaniyya, 82
- hājib*, 82
hajj, 1, 10, 34, 36, 48, 49, 50, 76, 82,
 91, 92, 96, 97, 98, 99 n.239, 103, 105,
 107, 114 n.83, 116, 127, 130, 131,
 157, 180, 259, 263
hajjān, 91
halqa, 71 n.87
ḥammām, 88, 120
haute cour, 54 n.4, 58
ḥisba, 148
hüküm, 97
hujra, 36
- īdād*, 71
imārat al-^carab / imārat al-^curbān, 42 n.85, 72
iqṭā'^c, 45, 71, 72, 78, 82, 83, 84, 103
isfāhsalariyya, 71
- jamā'a*, 96, 100, 108
jihād, 37
- jūz'ya*, 96, 101 n.3, 117
jund, 27, 71
jund al-ḡalqa, 78, 82
- kātib al-darj*, 82 n.147
kātib al-dast, 82
kātib al-sirr, 82
kātim al-sirr, 82 n.147
khān, 72, 76, 88, 92, 263
khāna, 108
khāṣṣ-i mīrī liwā', 95, 96
khāṣṣ-i shāhī, 95
khāṭib, 71
kūra, 27
- liwā'*, 93, 95, 96, 100 n.2, 101, 107, 112,
 113, 116, 120, 124
- maḡrasa*, 88, 89, 110 n.61, 122 n.139
maḡister, 58
majlīs al-sāmī, 74 n.105, 83
mamlaka, 47, 48, 78, 80, 81, 82, 90, 128,
 129, 265, 269
manshūr, 83, 84
maqām, 68, 93
māristān, 88
 markāz, 90
marsūm, 83
mathesep, 58
maydān, 88
mazrā'a, 101
mī'mār, 99
mūhmandār, 71 n.89, 82
mīr liwā', 96, 101, 107, 112, 116, 120,
 124, 130
mūhḡāl, 130
mubāshir, 95
mubāshiriyya, 71 n.89
muḡvada, 71
muḡakkim, 71
mūhandīs, 89
muḡtasib, 58, 71
muḡjarrad, 108
mulk, 95
muḡaddam, 45, 83
muḡātila, 40
mūstahfizān, 98
mutawallī, 69, 71, 82
mūteferrika, 98
- nafs*, 96, 101, 112, 116
nāhiya, 95, 96, 101, 102, 105, 107, 108,
 112, 116, 117, 120, 124, 131, 132, 134
nā'ib, 47, 78, 81, 97 n.229, 114, 266

- nā'ib al-qal'a*, 82
nā'ib al-saltāna, 81, 82, 84, 92
naqīb al-jaysh, 82
nāzīr al-buyūt, 82
nāzīr al-jaysh, 82
nāzīr al-khāss, 80
niyāba, 78, 80, 81

pādīshāh, 101, 107, 120, 124

qādī, 71
qādī al-'asākīr, 82
qādī al-quḍa', 82
qal'a, 92, 99
qarāghulāmiyya, 71
qarya, 96, 101
qasr, 86, 91
qulla, 88

rahan, 107
ra'īs, 58, 71
ra'īs nawba, 93
rukṅ, 93

sabīl, 88
shāhib al-nawba, 82
sāhiyāne, 96 n.220
sanjaq, 50, 93, 95, 96, 97

sanjaqbey, 49, 265, 266
secrēte, 56
seneschal, 30, 56
seigneurie, 54, 56, 57, 58
siphāsalarīyya, 71 n.86
subāshī, 95
sūq, 107
surra, 103

tāhūn, 96, 101 n.3, 121
tārīma, 87
tīmār, 95, 101, 107, 120, 124

ustādh-dār, 75, 76

viscount, 54, 58

wakīl bayt al-māl, 82
wālī, 78, 90
wālī al-qal'a, 82
waqf, 77, 80 n.135, 84, 88 n.177, 95, 101,
 107, 119, 120, 121 n.139, 124
wilāya, 78, 80, 89

yākūn, 101

zā'āma, 95, 101, 107, 124
ziyāra, 77

PLATES 1-41



Plate 1. Lead seal of Reynald of Châtillon (1177-87), Cabinet des Medailles, Paris. After Deschamps (1939).



Plate 2. Representation of Karak from the Madabā mosaic map, sixth century.

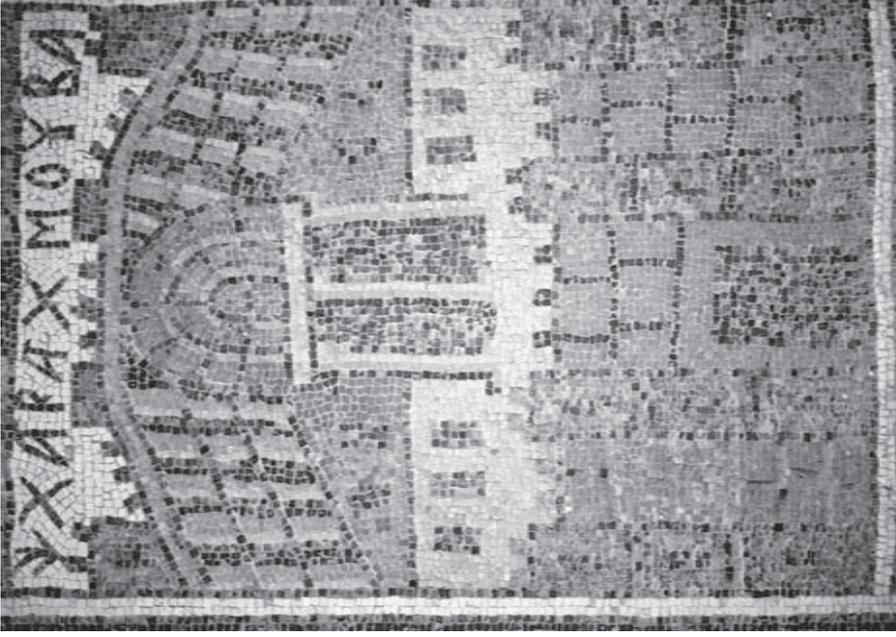


Plate 3. Representation of Karak from the mosaic floor of the church of St Stephen, Umm al-Raṣāṣ (dated 718).

- 1. & 10. Moat
- 2. North front
- 3. Crusader-period entrance
- 4. Crusader chapel
- 5. Lower bailey
- 6. Mamluk-period entrance
- 7. Palatial complex
- 8. South keep
- 9. Reservoir

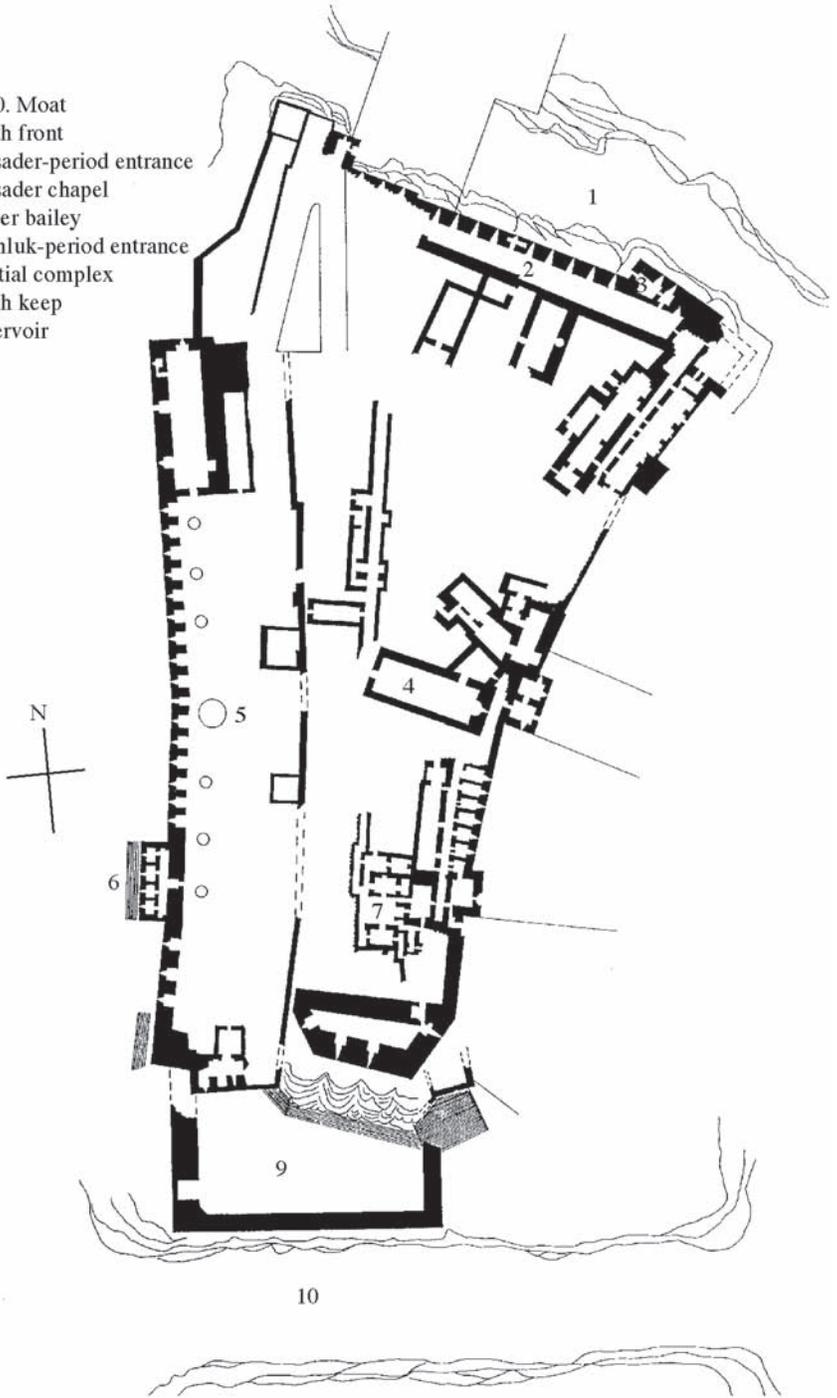


Plate 4. Plan of Karak town and castle.

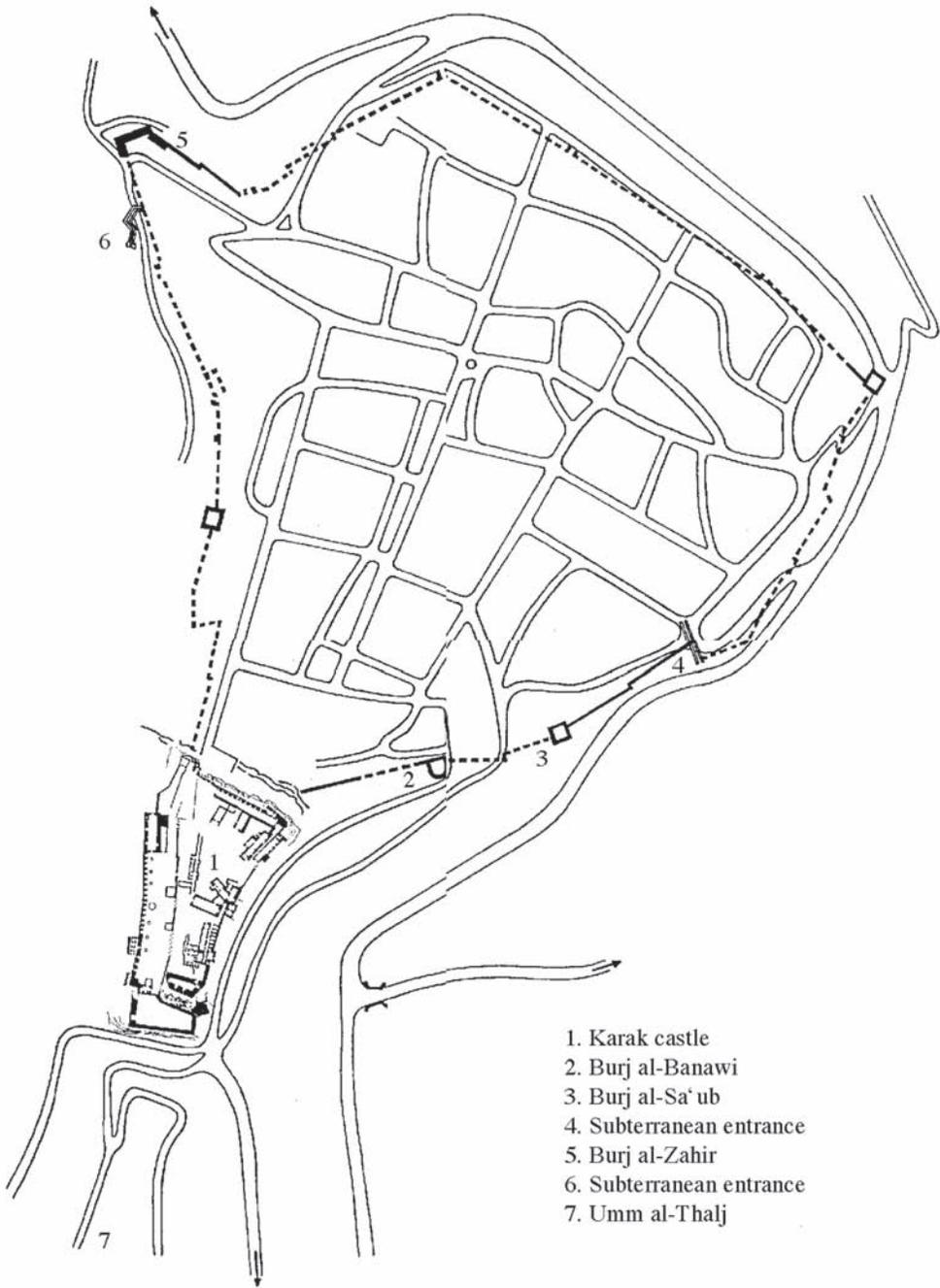


Plate 5. Plan of Karak castle. After Deschamps (1939).

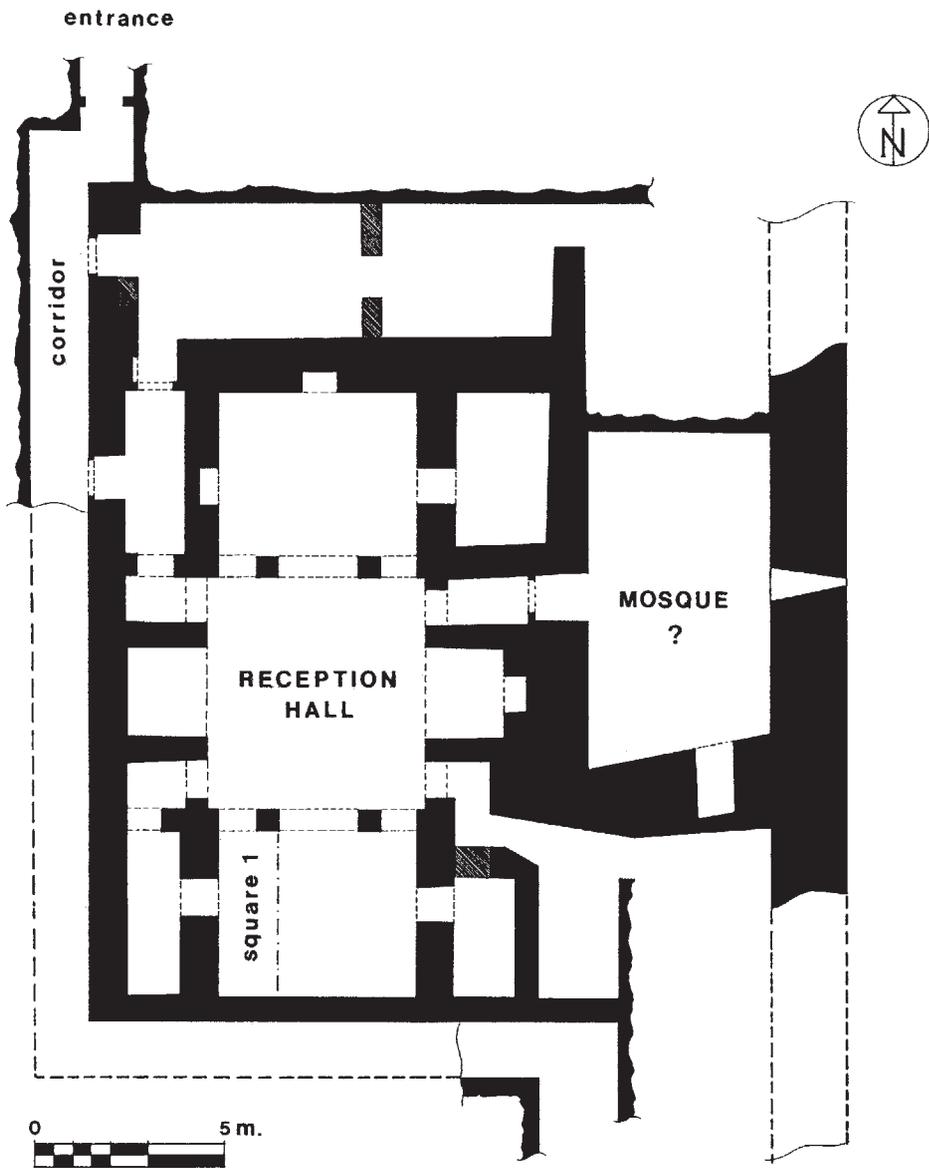


Plate 6. Plan of the 'reception hall' complex, Karak castle. Reproduced by permission of Robin Brown.



Plate 7. Karak castle seen from Marj al-Thāniyya (looking west).



Plate 8. Karak castle seen from the southwest.

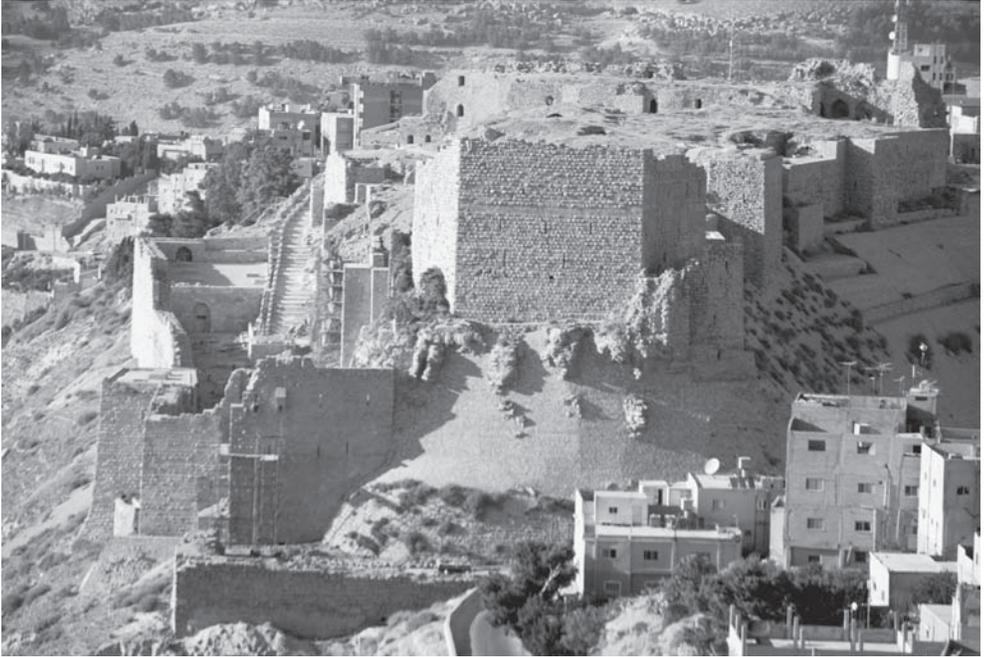


Plate 9. Karak castle seen from Umm al-Thalj from the south.



Plate 10. North front and northeast salient, Karak castle, from the west.



Plate 11. Glacis and east front of Karak castle, from the north.



Plate 12. Lower bailey of Karak castle, from the north.



Plate 13. Frankish chapel, upper bailey, Karak castle.



Plate 14. Mamluk keep, Karak castle, from the south.



Plate 15. Entrance on west side, Karak castle.



Plate 16. Carved limestone panel with interlace pattern.
East side of Karak castle. Probably fourteenth century.



Plate 17. Burj al-Zāhir, Karak, from the northwest.



Plate 18. Burj al-Banawī, Karak, from the south.



Plate 19. Detail of the inscription on Burj al-Banawī.



Plate 20. Burj al-Şa'ub, Karak.



Plate 21. Shawbak castle seen from the south.



Plate 22. Frankish parish church, Shawbak.

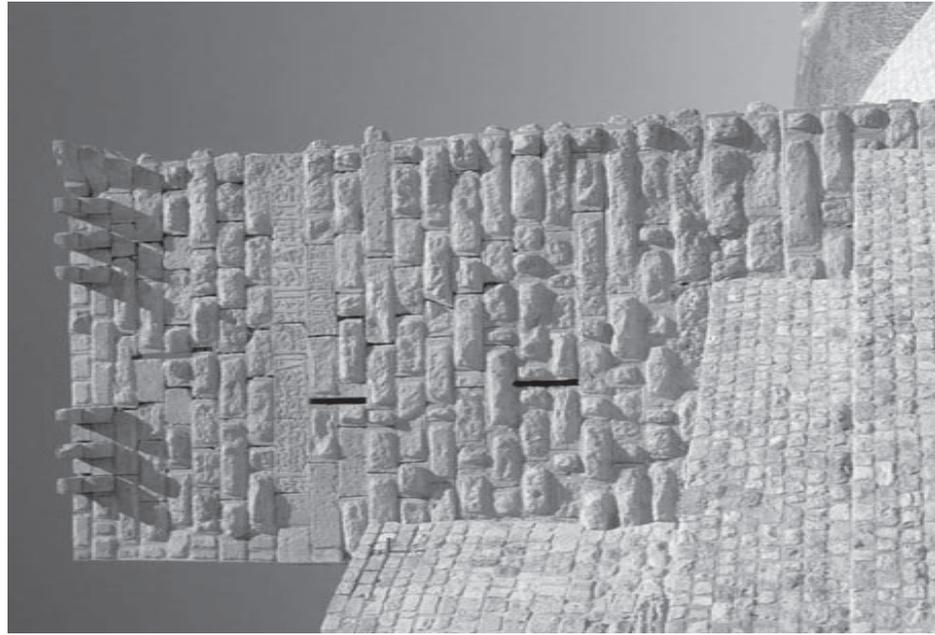


Plate 23. Mamluk period tower near entrance, Shawbak.

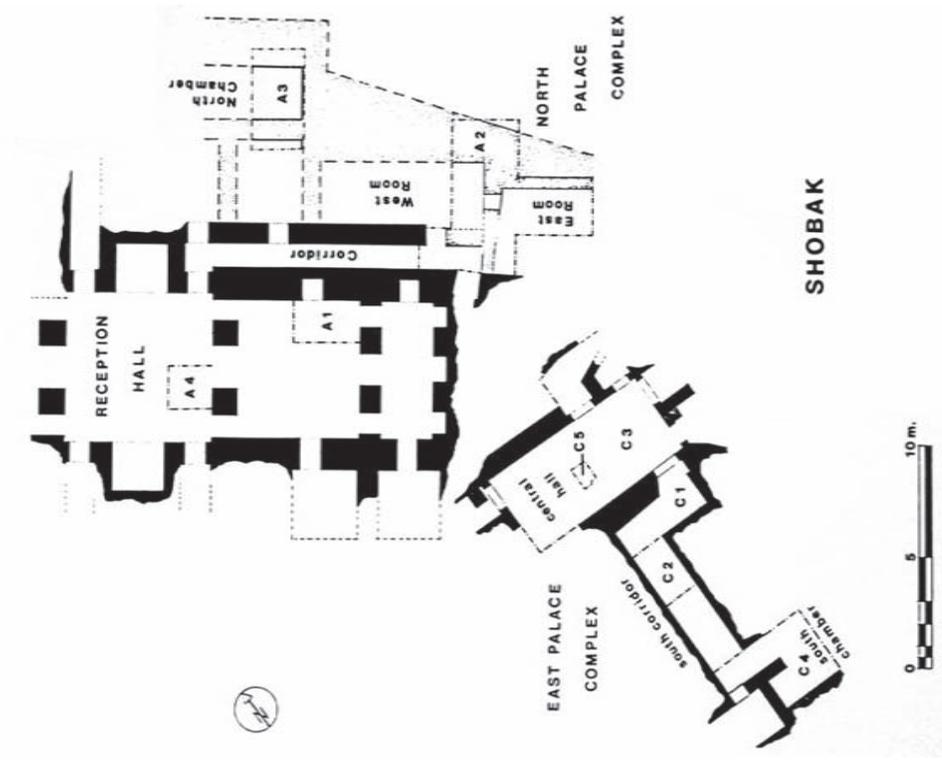


Plate 24. Four-iwan reception hall, Shawbak. Reproduced by permission of Robin Brown.



Plate 25. Muslim shrine near Shawbak.



Plate 26. General view of Wu'ayra,
Wādi Mūsa.



Plate 27. Entrance to Wu'ayra.



Plate 28. View of Habis.



Plate 29. Arrow slits in the curtain wall of Habis.



Plate 30. Tower at Tafila seen from the south.



Plate 31. Watchtower at the 'Ammān citadel.



Plate 32. Masonry at the summit of Jabal al-Qal'a, Salt.



Plate 33. Monument to the battle of Mu'ta. Mamluk period.



Plate 34. Fort at Ayla/ʿAqaba.



Plate 35. *Hajj* fort at Qatrāna.



Plate 36. *Hajj* fort at 'Unayza.



Plate 37. Qal'at al-Ḥasā.



Plate 38. Bridge at Ḥasā.



Plate 39. Carved and painted stucco fragments found in area A. Probably late thirteenth or fourteenth century.



Plate 40. Enamelled glass found in area A. Late thirteenth or fourteenth century.



Plate 41. Marvered glass found in area A. Thirteenth or fourteenth century.